A NEEDS-BASED CANADA HEALTH TRANSFER: DRAWING LESSONS FROM AUSTRALIA

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ABSTRACT

Medicare in Canada is a federally and provincially funded public service. The federal government provides financial assistance to the provinces for Medicare through the Canada Health Transfer (CHT), which, along with the other federal transfers (Canada Social Transfer and Equalization), intends to correct the country's vertical fiscal gap. The federal government has an important role in Medicare, which is to work with the provinces to ensure all Canadians have access to Medicare and to ensure a national standard of Medicare (Government of Canada 1982; Senate 2002).

In 2014, the federal government unilaterally amended the CHT formula to an equal-per-capita distribution. This change means the provinces receive their CHT portion based exclusively on their percentage of the national population. The change makes it more difficult for some provincial governments to provide comparable levels of Medicare services because of their relatively lower fiscal capacity and higher medical needs of their populations. A potential way to recognize the inherent differences between provinces and territories is to allocate the CHT based on need. Compared with the simple equal-per-capita allocation, a needs-based formula (NBF) is a fairer allocation of finite resources based on distribution of health needs, but it presents a number of problems. Distributing resources based on need may create inefficiencies or lack transparency because a more complex formula may create unintended consequences, resulting in moral hazards and perverse incentives (a perverse incentive is the negative result of an otherwise good intension). A needs-based CHT formula is likely to succeed only when it properly balances equity, efficiency, and transparency criteria.

An equitable, efficient, and transparent formula composition can help an NBF succeed in upholding a national standard, but whether an NBF is feasible depends on the institutional, fiscal, and political context of Canada. Policy makers interested in designing an NBF can look to other countries that use an NBF. However, current literature focuses on formula composition and fails to explain why countries have differing formulas. This study first attempts to fill the gap in the literature by proposing a framework to develop an NBF. Second, the study uses a comparative analysis to understand the historical context of Canada and Australia in developing their respective federal health-transfer programs. Through these analyses, this study aims to answer

one question: is it possible to implement a needs-based formula for CHT that is equitable but also minimizes perverse incentives?

This study finds that an ideal NBF formula for CHT that meets the criteria of equity, efficiency, and transparency should include age structure, sex, and location of populations. Through the comparative study of Australia and Canada, the study finds that it is possible to implement an NBF formula that considers age structure, sex, and location of populations. However, feasibility of such an NBF in Canada is dependent on establishing a collaborative relationship between the federal, provincial, and territorial governments. In spite of the decentralized fiscal power and regional divides in Canada, it is possible for the governments to collaborate given the strong national support for the Medicare system. Canadians value their Medicare system, which they see as a supranational program that transcends regional interests, and desire to see their governments work together to ensure equitable access to Medicare services. To meet the expectations of Canadians and safeguard Medicare, the federal and provincial governments could adopt the Australian approach and collaborate through a formal body like the Commonwealth Grants Commission or the Council of Australian Governments. By working together through these formal bodies, there is a chance that Canada could adopt an NBF for the CHT, secure a national standard of Medicare, and support the values Canadians have for their Medicare system.

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INTRODUCTION

Medicare in Canada is constitutionally a provincial jurisdiction. However, Canadians view Medicare as a right of citizenship. Medicare is an integral part of Canadian identity. To be a Canadian is to have equitable access to Medicare regardless of ability to pay or location.[1]

To ensure a national standard in Medicare, the federal government transfers the Canada Health Transfer (CHT) to the provinces and territories to support them in providing Medicare services. The constitution supports the federal government's involvement in Medicare. Section 36(1) c of the constitution specifies that the federal government and the provincial governments commit to providing Canadians with essential public services of reasonable quality (Government of Canada 1982). Although there has been no legal interpretation of Section 36(1) c specifying Medicare as an essential public service, Canadians consistently view access to Medicare as integral to their citizenship (Romanow 2002; Dufresne et al. 2014).

Through the CHT, the federal government attempts to uphold a national standard of Medicare services (Boadway 2004). To incentivize the provinces to maintain a universally provided public Medicare system, the federal government attaches conditions to the CHT. Provinces are eligible to receive the CHT if they abide by the five principles of the *Canada Health Act* (CHA): public administration, comprehensiveness, universality, portability, and accessibility. Public administration means that non-profit public officials must administer insured health-care services (i.e. services provided by physicians and hospitals). Comprehensiveness means Medicare insures all medically necessary services. Universality means all insured residents of Canada are entitled to the same standard of health-care. Portability means insured Canadians who move to a new province, territory or out of the country are entitled to coverage of their home province or territory for a set period (i.e. three months). Finally, accessibility means all insured Canadians have reasonable access to medical facilities (Government of Canada 1985). The provision of the CHT to uphold the five principles helps provinces and territories provide Canadians with Medicare of reasonable quality, but an amendment made to the CHT formula in 2014 may compromise the overall objective of the CHT

[1] A possible reason for Medicare being a part of Canadian identity is Canadians desire to differentiate themselves from the Americans. The United States has a large privately funded primary care component and Canada seeks to differentiate itself from its neighbour through its universal public Medicare system (Dufresne et al. 2014).

and potentially threaten the ability of some provinces to provide Medicare services (Government of Canada 1985).

In 2014, the CHT allocation formula was amended from an equal-per-capita total cash and tax point transfer to a simple equal-per-capita cash transfer. An allocation on equal-per-capita cash basis means the only factor that determines a province or territory's CHT entitlement is the total number of residents in the province or territory. The federal government claimed the amendment would treat the provinces more equally, and respect their autonomy over Medicare, but this policy change is incongruent with national healthcare policy objectives from a number of perspectives (Vodrey 2012). First, an equal-per-capita distribution assumes all Canadians have the same health needs and the same abilities to access Medicare services; the amendment stands in contradiction to empirical evidence illustrating that health needs and access to services vary across the population (Hay 1988; Marchildon and Mou 2014; Rosella et al. 2014). The 2014 CHT formula amendment also assumes the costs of providing Medicare are the same per person and fails to recognize the additional costs of providing Medicare in some provinces or territories compared with others, due to age, distance to medical treatment centres, and socio-economic status, resulting in an inefficient and inequitable CHT (Stillborn 1997).

Indeed the ten provinces and three territories in Canada have different needs and costs for Medicare. Table 1.1 below summarizes some of the major disparities among the provinces and territories that may influence the cost of providing Medicare to their residents.[2]

[2] Although there are significant differences between the provinces and the territories in geographic dispersion of population, the territories receive funding from the federal government (Territory Formula Financing, TFF) to mitigate the cost of providing public services to isolated communities and the amount of TFF for each territory is much larger than their CHT entitlement (Department of Finance Canada 2016). If the CHT formula included indicator of location of population for the territories, the need of territories due to location would be double counted. For this reason, the discussion in this study focuses more on the disparities among provinces than on the differences between provinces and territories.

Table 1.1 Major Disparities among Provinces and Territories in 2014

	Size of provincial population (% share of Canada)	Share of population over age 65 within the province/territory	Population-weighted average distance to the nearest urban center	Per Capita CHT ($) 2014
Alberta	3,790,191 (11%)	10%	39km	$903.58
British Columbia	4,499,139 (13%)	15%	28km	$903.58
Manitoba	1,233,728 (4%)	14%	49km	$903.58
New Brunswick	755,530 (2%)	16%	37km	$903.58
Newfoundland	525,037 (2%)	16%	63km	$903.58
North West Territories	45,400 (0.13%)	7.71%	372km	$903.58
Nova Scotia	944,469 (3%)	16%	34km	$903.58
Nunavut	34,100 (0.10%)	4.11%	1445km	$903.58
Ontario	13,263,544 (39%)	14%	25km	$903.58
Prince Edward Island	144,038 (<1%)	16%	20km	$903.58
Quebec	8,007,656 (23%)	16%	22km	$903.58
Saskatchewan	1,066,349 (3%)	14%	53km	$903.58
Yukon	35,800 (0.10%)	11.45%	477km	$903.58

Source: Marchildon and Mou 2014; PBO 2014)

Table 1.1 shows that the Canadian population is not evenly distributed across the ten provinces. Ontario and Quebec are home to more than 50% of the Canadian population. A large part of the remaining population is concentrated in Alberta and British Columbia, with a minority occupying the Atlantic provinces of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, and the prairie provinces of Manitoba and Saskatchewan. The table shows the different age structure of populations across the country with Alberta having the lowest percentage of seniors, while Quebec and Atlantic provinces have the

oldest population profiles. The provinces also differ substantially in relation to the average distance of residents from the nearest urban center. [3] The distances matter because the cost of providing Medicare services to citizens in remote locations is higher than the cost for citizens in urban locations due to the cost of transportation equipment (i.e. ambulances and planes) and the higher cost of staff (Hurley et al. 2003).

Finally, Table 1.1 shows the per capita CHT allocation in 2014. The per-capita entitlement of CHT is the same across provinces and territories despite the inherent disparities among them. The inherent differences between the provinces and territories suggest that, even if the provinces and territories had the same capacities to raise revenue, an equal-per capita distribution of CHT would not enable the provinces and territories to provide comparable levels of Medicare services.

A potential method to ensure the provinces and territories are able to provide comparable levels of Medicare services is by recognizing the inherent population differences and adopting a needs-based allocation formula (NBF). This study aims to answer if it is possible to change the current CHT formula to a needs-based formula that ensures the allocation is equitable and minimizes perverse incentives. The study further examines if it is feasible to implement a needs-based formula given the current Canadian context.

There is a large literature on NBFs for the distribution of health-care resources within a province in Canada. Gravelle et al. (2003) and Kephart and Asada (2009) have conducted empirical studies to evaluate the merits of a needs-based allocation of funding against a simple equal-per-capita distribution, and concluded that a needs-based formula was better because an equal-per-capita distribution fails to consider the differing needs and costs within a population. However, they focused on the empirical linkage between health-care cost and potential needs indicators and failed to provide a conceptual framework about the construct of a needs-based formula. McIntosh et al. (2010) conducted a comparative study of the Canadian provinces that use a needs-based formula to distribute health-care funding to health regions. Their study

[3] The average distance is calculated as the population size weighted average distance of citizens from the nearest urban center. This indicator thus captures both distribution of population and distances. The average distance is preferred to the share of rural population in total population because using the latter may be misleading. According to Statistics Canada, Prince Edward Island has a high share of rural population (i.e. 55%), but the average distance needed to travel to an urban centre is the lowest in the country because the population lives close to the two urban centers (Marchildon and Mou 2014). Therefore, a simple calculation of rural population size in an allocation formula would not necessarily reflect the true needs of those who live far away from urban centres.

focussed on the formula composition within each province and provided detailed explanations as to how each variable related to health needs. However, the study did not answer the important question of why (or why not) each province adopted the needs-based approach, and why and how specific need indicators were chosen from an assortment of available indicators.

Eyles and colleagues (1993) proposed a needs-based formula for the government of Ontario Ministry of Health because they argued the needs-based approach better reflected the policy objectives of Medicare (i.e. meet the needs of Canadians) than did a utilization based allocation system. The authors provided an array of policy options weighing the pros and cons of using various indicators of need (i.e. demographics, mortality, and socio-economic status). The authors further suggested that the likelihood of a needs-based formula in Ontario was great both technically and politically, the latter of which was confirmed by the fact that Ontario adopted a needs-based formula in 1993 (McIntosh et al 2010). The technical aspect of the Eyles and colleagues paper is useful in understanding the pros and cons of using various indicators of need; however, the political lessons from the paper are less important to the study on the CHT because CHT is a national program while Ontario's transfer is a transfer to health regions. The difference between the two transfers is the CHT is a federal transfer to the provinces who have jurisdiction over Medicare, while Ontario's transfer is a transfer to regions who do not have jurisdiction over Medicare. The difference between the two transfers means political tension is likely to be higher in the context of the federation (CHT) than in Ontario.

Compared with the literature on a NBF for health transfer allocation within the provinces, there are few studies on adopting an NBF for CHT at the federal level. Among the few studies on a NBF for CHT, Hutchinson and colleagues (1999) argued that the federal government should adopt a needs-based formula for the Canada Health and Social Transfer (precursor to the CHT and CST) because it would reflect the needs of the population. They argued that allocating resources based on need coincided with the values of Canadians because Canadians want their Medicare system to be available to those who need medical treatment. The authors suggested an NBF would be ideal because an NBF was more transparent than a risk based formula that relies on disease prevalence data. The authors did not provide empirical evidence regarding what such an NBF would look like and provided no method to design an NBF. Further, the authors did not provide detail on how policy makers could implement an NBF. To date, there is little literature on the design of an NBF for the CHT.

Marchildon and Mou (2014) first designed an NBF for CHT. They argued that due to the disparities in population age and population dispersion throughout the Canadian provinces and territories, the equal-per-capita formula meant a lower share of CHT for several provinces than under the former CHT allocation and that this could potentially erode national Medicare standards (Marchildon and Mou 2014). They suggested the CHT allocation should adopt the needs based approach and change the equal-per-capita formula to incorporate population age and location variables. Although Marchildon and Mou (2014) proposed and justified a simple needs-based formula for the CHT, they did not provide policy makers with a theoretical guideline about how to understand needs and how to make a practical needs-based formula, nor did they offer examples of needs-based formulas used in other countries.

Indeed, An NBF is a more equitable distribution of the CHT compared with an equal-per-capita allocation, but developing an NBF raises numerous issues. An NBF requires need indicators based on theoretical justification and support of empirical evidence. Developing a formula is difficult for policy makers because the empirical evidence required is not always available and the more nebulous a formula is the more complex and less transparent it becomes. In addition, some variables that measure need uphold equity but reflect an inefficient distribution of resources. Policy makers must have a clear understanding of needs and simultaneously balance equity and efficiency concerns in order to choose among a variety of need indicators (Peterson and Alexander 2002).

However, there is surprisingly almost no research exists that studies the theoretical foundation of a needs-based allocation. The existing NBFs include an array of “need” indicators but no study has clearly defined need and laid out the relationship between need and the overall cost of health-care. In addition, although all legitimate needs can be potentially included in NBFs, trade-offs between equity and efficiency are necessary and few have defined the equity and efficiency criteria in the context of selecting need indicators. Among the few theoretical discussion of needs-based formula, Smith et al. (2001) recognized the importance of defining and disentangling the inefficiencies of using individual health data in the needs-based allocation of health funding in England. For example, local service providers may change the number and quality of services provided based on funding received (i.e. perverse incentive). However, their work is limited to one component of needs-based allocation (efficiency) and does not provide a comprehensive understanding of the basic concepts and reasoning behind a NBF for health

transfers. Therefore, a comprehensive understanding of the theoretical foundation of NBF has to be formed to guide the discussion of NBFs.

A second gap in the current literature is the lack of an analysis of the contextual factors behind the development of NBFs (Penno et al. 2013). Policy makers interested in changing the CHT may make informed decisions by examining other NBFs. However, existing comparative analyses focus on similarities and differences in formula composition (e.g., Rice and Smith1999), but do not delve into *why* countries adopted the needs-based allocation approach and how and why that formula evolved over time.

This paper intends on expanding on the body of literature summarized above, and seeks to fill the literature gap by proposing a theoretical framework to define health-care need, understand the relationship between needs and other factors that contribute to the overall cost of health-care, and establish the equity and efficiency criteria for designing an NBF. The result of this study provides a template for policy makers who are interested in developing or modifying an NBF

This study then aims to answer the question: is it possible to design a needs-based allocation formula for CHT that is equitable but also minimizes perverse incentives? To answer this question, the study takes a two-pronged approach: it first evaluates the commonly used need indicators against equity and efficiency criteria. The study finds that the only need indicators that satisfy both equity and efficiency criteria are age, sex, and location of population because the three are equitable (i.e. reflect health-care need) and efficient (i.e. minimize perverse incentives).

The study then considers the feasibility of an NBF in Canada through a comparative, contextual analysis of Australia and Canada's transfer-development histories. The comparative study explains why the two countries took different approaches in allocating federal health transfers and outlines the important institutional and political conditions necessary for adopting an NBF in Canada. The comparative study concludes that it is unlikely Canada could adopt an NBF for the CHT in the short term because of the structure of federalism in Canada. However, because of Canadians' belief in universal Medicare, it is possible that the two levels of governments could take the Australian approach and collaborate through formal bodies in order to uphold a national standard in Medicare.

In practice, the Canadian federal government already considers needs when it uses the Territorial Funding Formula to allocate funds to the three northern territories of Canada. The

federal government recognizes that the remoteness of the population in the territories causes higher costs for public services and attempts to mitigate the higher costs by providing additional funding support. Despite the recognition of need, the Territorial Funding Formula does not include specific indicators of need, nor does it used a mathematical formula to allocate funds to the territories. The principle behind the Territorial Funding Formula is important because the government recognizes that inherent differences exist in the country and seeks to mitigate the issue. The same principles are useful in the context of CHT. This study provides policy makers a framework for designing a NBF for the CHT based on the same principle of recognizing needs.

This thesis is comprised of five chapters. Chapter one provides a theoretical foundation of NBF and defines a desirable NBF. Chapter two identifies the commonly used need indicators of health-care in the literature and discusses their pros and cons against the equity and efficiency criteria established in chapter one. Chapter three delves into the methodology of the thesis – a comparative analysis of Canada's federal health-transfer system and Australia's federal equalization program. The analysis uses a historical-institutionalism lens to draw lessons from the Australian history. Chapter four tells the story of Canada's federal health-transfer development in conjunction with Australia's story of transfer evolution, and provides a number of important lessons Canadian policy makers can draw from the Australian experience. Chapter five concludes the thesis by summarizing the study, identifying the limitations of the study, and highlighting directions for further research on this topic.

CHAPTER 1

THE THEORETICAL FRAMEWORK

The success of a government program requires two essential conditions - the program has to be desirable and practical (Rose 2005). A formula is desirable if it is both equitable and efficient. In the context of a funding allocation formula, equity means it is fair to the population and promotes national values; equity exists if money distribution meets population needs. Efficiency means maximizing output from the health transfer and minimizing perverse incentives for subnational and federal governments.[4]

The second necessary condition is practicality. This condition has two sub-criteria: political feasibility and transparency. If a formula is acceptable by government and the public, the formula is politically feasible. A transparent formula implies the public can understand the formula and the rationale behind formula development.

If a formula is both desirable and practical, it has the highest possibility of success. If a formula is neither desirable nor practical, it is not likely to succeed. A formula that is practical but not desirable fails to achieve the primary objectives of a program. A formula that is desirable but not practical is unlikely to become law because of political backlash, in which case implementation of the formula is only possible when the practicality condition is met in the future. Table 1.2 summarizes the framework.

Table 1.2 Two Essential Conditions for the Success of a NBF

		Desirability (Equitable, Efficient)	
		High	Low
Practicality (feasibility, transparency)	High	*Yes*	*Not wanted*
	Low	*Possible in Future*	*No*

[4] A perverse incentive is a negative outcome resulting from an otherwise good intension.

This framework describes the key conditions for a policy program to work, which in turn depend on the institutions and context of a country at a particular time. Creating such a conceptual framework is useful because it provides a guide for policy makers designing an NBF.

1.1 The Basic Concepts of a Needs-Based Capitation Formula

1.1.1 Needs-Based Capitation Allocation Formula

Before discussing an NBF, it is important to learn how such a formula works. An NBF is a method of allocating scarce resources based on the headcount of a population in a given region, adjusted for certain population need indicators (Chaplin 2011). Making a capitation formula based on need requires a number of steps.

The first step is to select appropriate indicators of need and to integrate them into a formula. Step two is to compute the provincial/territorial aggregate needs based on the need formula. The national health-care need is the sum of all provincial/territorial needs. Step three is to find each province's relative needs-based share of the federal health transfer that is calculated as the share of each province's aggregate need within the national aggregate need. Multiplying each province's needs-based share with the federal total budget for the health transfer gives the total amount allocated to each province. Finally, in step four, the capitation rate of the health transfer is determined by dividing total transfer entitlement of a province by the provincial population. The final number obtained by the following formula yields a per capita amount based on relative need of the population in a province/territory:

$$Needs-based\ capitation\ rate\ of\ health\ transfer\ in\ a\ province/territory = \frac{(Share\ of\ provincial/territorial\ needs\ in\ national\ needs \times Total\ transfer)}{Provincial/territorial\ population} \quad (1)$$

Clearly, the definition and selection of need indicators are important in the design of an NBF. However, there is no agreed definition of need in the literature, which makes creating an NBF complicated. Below, I define need before establishing the criteria for selecting need indicators.

1.1.2 Defining Need

In health-care literature, the two common definitions of "need" are medical necessity and capacity to benefit (Birch and Eyles 1991; HSIP 2006). The CHA uses the term "medically

necessary" to identify publicly fundable Medicare (i.e. primarily services provided by doctors and in hospitals), but the CHA fails to define what "medical necessity" is and leaves the definition open to interpretation by health-care practitioners. This definition of need is appropriate because professionals with medical knowledge make educated decisions and determine who requires health-care services. The "medical necessity" definition thus separates health-care needs from health-care wants. Nonetheless, this definition has the potential to create inefficiencies because practitioners may have a financial incentive to induce their patients to receive more treatment than required.

Aside from medical necessity, the "capacity to benefit from the treatment" definition of need assumes a need exists if the value of treating the patient exceeds the costs of treatment (Birch et al. 1993). This definition indicates governments should prioritize their interventions in health-care by identifying which services provide the largest financial benefit to all Canadians. A government may choose to prioritize acute care over chronic care because the marginal benefit to Canadians is greater when treating acute conditions than when treating chronic diseases. In this way, resource allocation maximizes benefit.

Medical necessity and capacity to benefit seek to promote different goals; medical necessity promotes equity and fairness, whereas capacity to benefit promotes collective social welfare and efficiency. The more appropriate definition of need for the CHT is medical necessity because it conforms to the values Canadians place on their Medicare system. Canadians see equal and timely access to health-care services based on need as a right of citizenship (Romanow 2002) and an NBF for the CHT should use the need definition consistent with the values Canadians put on Medicare.

1.1.3 Needs, Non-Needs, and the Total Cost of Medicare in Canada

The federal and provincial government are obligated to ensure Canadians have access to essential public services (Government of Canada 1982). The constitutional requirement implies the federal government could have a role in Medicare and further implies the federal allocation formula should reflect the cost for *needed* Medicare services. Nevertheless, not all Medicare costs reflect actual needs; some Medicare costs lack empirical evidence to suggest medical necessity (e.g., supplier induced demand) (Stevens and Gillam 1998; Kephart and Asada 2009).

Figure 1.1 Decomposition of Medicare Costs

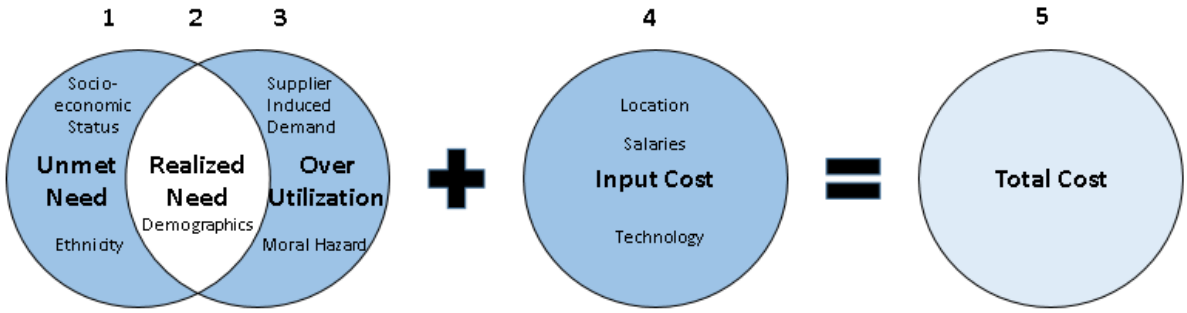


Figure 1.1 details the relationship between needs and the total cost of the Canadian Medicare system. Areas 1 and 2 in the figure are both need factors and, together, determine the total volume of Medicare needed by the population. Realized needs or "met needs" fall in area 2 and are reflected in the overall cost of Medicare, but among medically necessary needs, some needs are unmet and revealed by area 1. An unmet need is unaddressed by the current medical system. Populations generally have unmet needs because access to services is limited. Barriers to access are the result of socio-economic status, geography, lack of infrastructure and staff, jurisdictional ambiguities, and language or cultural barriers (Reading and Wien 2009).

Non-needs factors are areas 3 and 4, which, when combined, determine the additional cost of Medicare. Area 3 represents overutilization of Medicare, usually because of moral hazard of patients or supplier-induced demand. A moral hazard of patients is an overuse of the Medicare system by patients because they have no costs upfront and may use services in excess of need. Supplier-induced demand is an excessive use of services at the behest of the Medicare supplier. Leaving the assessment of needs to subjective judgements by medical practitioners creates supplier-induced demand. Hendee et al. (2010) examined over-utilization of health-care and identified that the major cause of over-utilization was individual (patients and doctors) decision making. A fee-for service model compensates physicians based on the number of times physicians see their patients. Hendee et al. (2010) identified that the fee-for service model of compensating physicians created over-utilization because physicians have an incentive to send patients for unnecessary diagnostics. The authors also cited that over-utilization is not necessarily the result of financial incentive. Physicians may not have the best knowledge on current practices or on the medical history of their patients, which could result in the physician sending the patient for unnecessary testing. Another problem identified by the authors is the issue of duplicate testing. A patient may not disclose that they have undergone specific testing

recently, and a new physician may send the patient for unnecessary retesting. In 2007, 9% of patients surveyed in Canada stated they received duplicate testing (CF 2008). Clearly, over-utilization exists in the current Medicare system. Implementing an NBF for the CHT will not solve the over-utilization of Medicare.[5] However, policy makers designing an NBF for the CHT should be mindful that allocating the CHT based on Medicare utilization could exacerbate the issue of over-utilization already present in Canada.

Furthermore, area 4 represents the factors not reflected in the other three areas; usually, the input cost factors influence the average cost of providing Medicare given a volume of need. Input cost factors include, for example, technology, physician salaries, and the cost associated with service location. Areas 3 and 4 represent cost factors that are not included in need measurement but contribute to the overall cost of Medicare.

The total cost of Medicare is the sum of realized needs, overutilization, and input costs (i.e. area 2+3+4=5). Unmet needs (area 1) are unrealized and therefore the total cost of Medicare does not include unmet needs. An ideal needs-based formula would include variables accounting for and affecting all legitimate needs. Legitimate needs include realized needs for those who require care and receive treatment, and unmet needs. Some of the input costs (area 4) are not a need but they can affect access to services for those who have need. For example, a person's proximity to medical services can affect access to the service (i.e. citizens in remote locations have difficulty accessing medical services), but a person's proximity to medical services does not mean a person has a medical need (i.e. citizens in remote locations do not necessarily have more needs). Overutilization (area 3) is not a legitimate need because the use of the Medicare system is in excess of need (i.e. supplier induced demand or moral hazard of patients), but overutilization is still captured in the total cost of Medicare.

1.2 Criteria for Selecting Need indicators for an NBF

Figure 1.1 demonstrates a decomposition of the total cost of Medicare and the relationship among the components. Among the various factors, policy makers need to pick the appropriate need and cost indicators to promote their policy objectives. Meeting equity and efficiency criteria is crucial when choosing these need and cost indicators for an NBF (Magnussen 2010).

[5] Removing the incentive for physicians would require changing the fee-for-service model. Physicians would require more information on best practices given a patient's individual circumstances and patients would need to disclose their medical history with their physician. Solving the issue of over-utilization of Medicare in Canada is beyond the scope of this study.

1.2.1 Equity

Medicare remains an integral part of Canadian nationhood because many Canadians are proud of how Medicare predicates universal medical treatment for all. *The Commission of the Future of Health Care in Canada* found that Canadians support the core values of equity, fairness, and solidarity in their Medicare system (Romanow 2002). In addition, these core values coincide with the Canadian understanding of citizenship. Clearly, equity is an important part of Canadian Medicare, which precludes that a funding allocation formula designed to support the Canadian Medicare system should include equity.

There are two types of equity in Medicare: equity of health outcome, and equity of access. Equity of outcome means all people have the same opportunity to live a healthy life. Equity of access means that all people have the same opportunity to use Medicare services regardless of income, education, or location (Kirigia 2009). Equity of access is a more appropriate definition when defining equity in NBFs because the determinants of a healthy life are not solely reliant on Medicare. Health outcomes are the result of a myriad of controllable and uncontrollable factors. The World Health Organization identifies where a person lives, the state of the environment, genetics, income, age, sex, and social networks combine to affect one's health outcomes. Factors such as genetic predisposition and other factors are non-controllable, but health outcomes are also influenced by individual circumstances and individual choices. For example, a person's choice to smoke cigarettes can have a negative impact on his/her health outcome (WHO 2016). In addition, it is widely accepted that the measure of health outcomes or one's perception of a healthy life are inevitably different, which means the allocation of Medicare resources based on equity of outcome is inappropriate (CIHI 2008). Statistical evidence also shows an unclear picture attempting to link health spending to health outcomes. For example, the Commonwealth Fund recently ranked Canada tenth among developed countries in terms of providing quality, equitable, and efficient health-care (CF 2014). In 2014, Canada only ranked higher than the United States while Australia ranked fourth. According to the report, Canada spends more on healthcare per capita than Australia but achieves worse outcomes than Australia. This study demonstrates that it is unclear how financial inputs link to health outcomes and therefore warrants deeper investigation. Given these problems with measuring and assessing health outcomes, equity of access is a more appropriate definition because it coincides with the

values Canadians place on their Medicare system – Canadians value timely access to their Medicare system based on need for medical services (Romanow 2002).

Equity of access is the most appropriate definition of equity and can be evaluated against the two measures of equity. Using egalitarian theory, Mooney (2000) argues there are two types of equity: vertical equity and horizontal equity. Horizontal equity means those of equal condition should be treated equally; in Medicare, this means that all those with the same Medicare needs receive equal treatment (Le Grand 1987). Vertical equity means those with unequal condition warrant unequal treatment; in Medicare, this means that someone with a more severe case warrants more care or more aggressive treatment of his/her condition. These definitions coincide with the principles in Canada Health Act and the overarching Medicare values Canadians hold because the purpose of Medicare in Canada is to provide medically necessary services to all Canadians who need them (Government of Canada 1985), or in other words, meet the Medicare needs of all Canadians. The current equal-per-capita CHT formula treats Canadians accessing Medicare with horizontal equity; however, Canadians' need for and access to health-care services vary as demonstrated in Table 1.1. This implies CHT should also reflect the criterion of vertical equity by allocating more resources to regions with higher needs (Le Grand 1987; Mooney 2000). The resulting need-based formula, based on the principle of vertical equity, would support the sense of nationhood drawn from Medicare because it recognizes inherent disparities in health needs among the population and seeks to mitigate these differences (Romanow 2002; Kirigia 2009).

1.2.2 Efficiency

Unlike equity, efficiency is not an explicit value or principle examined in the CHA or the *Constitution Act*, but an NBF should aim to maximize social benefit (Smith et al. 2001). Consistent with the objectives of the CHA, efficiency requires that more resources go to those who have the greatest need. An efficient allocation formula means the marginal cost of CHT (money transferred to the provinces) equals the marginal benefit (improvement in health status). To meet the criteria of efficiency, a formula should include variables measuring legitimate needs or legitimate non-needs while minimizing perverse incentives. A perverse incentive is the negative result of an otherwise good intention. For example, if the government provided the provinces with funds based on socio-economic status, provinces may avoid addressing socio-economic concerns. For example, if "poor housing condition," a proxy for socio-economic

status, was included in a CHT allocation formula, the receiving provincial government may not create policies to alleviate poor housing conditions because the government receives CHT based on the number of poor houses it has. The use of “poor housing condition” as a variable in an NBF could create a perverse incentive. Policy makers should therefore attempt to find need indicators that minimize or are free of perverse incentives. For example, the use of an age indicator is free of perverse incentive. Age cannot be manipulated (an individual is either 65 or he or she is not 65), which means age meets the criteria of efficiency.

In policy decision making, policy makers often confront the trade-offs between equity and efficiency, and creating an NBF is no exception. The ultimate objective of the formula is to ensure equitable and timely access to Medicare based on need rather than the ability to pay (Romanow 2002). In addition, Canadians pay for their Medicare system through taxation and expect their governments to spend wisely on the services they need, which implies government should spend taxpayer money efficiently. The criteria of equity and efficiency are helpful for policy makers in choosing need indicators that reflect the health needs of Canadians and, simultaneously, maximize the possible benefit in allocating financial resources.

CHAPTER 2
CREATING A NEEDS-BASED FORMULA

2.1 Need Indicators

Chapter 1 sets the framework for developing a desirable NBF by identifying the core components of a needs-based capitation formula, defining need, creating a link between need and costs, and establishing the equity and efficiency criteria for selecting need indicators. The next step in designing a desirable NBF is to find appropriate indicators of need. Three commonly used categories of need indicators are utilization, demographics, and socio-economic status. Below I first describe these need indicators and then evaluate these need indicators against the equity and efficiency criteria.

2.1.1 Utilization of Health-Care

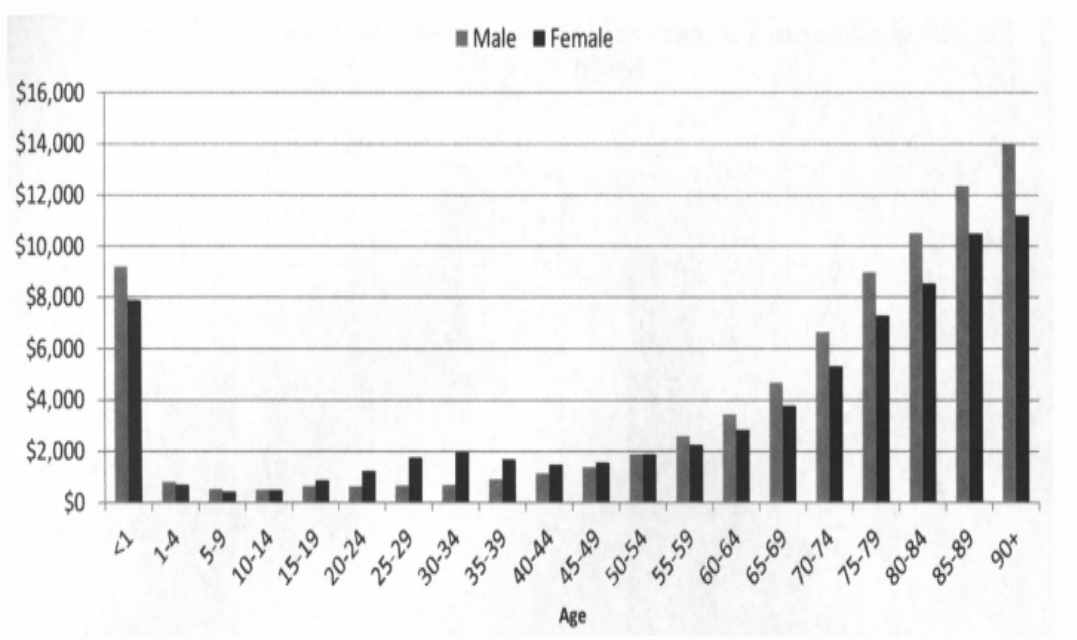
The utilization of health-care is a commonly used indicator of direct need (Hutchinson et al.1999; Hurley 2004; Hurley et al. 2004). Utilization data measures the number of services used, whether or not services are medically necessary. Gravelle et al. (2003) and Vallejo-Torres et al. (2009) argued a utilization model is a useful method to indicate need, but utilization data fails to capture overutilization (area 3 in Figure 1.1) and unmet need (area 1 in Figure 1.1. For this reason, Gravelle et al. (2003) suggested against direct use of utilization data. Instead, they argued that the utilization data adjusted for distance to hospitals, wait times, and ethnicity better reflects actual need because these adjustments capture some of the unmet needs. For example, because people wait to receive medical treatment, they have unmet needs not captured by utilization data. Gravelle et al. (2003) also argued using ethnicity as an indicator of need because Canadian Aboriginals often have unmet need.

2.1.2 Population Demographics

Direct indicators of need such as utilization have the bias of including overutilization and ignoring unmet needs. Policy makers have the option of using indirect indicators of need that can capture the expected needs in a population. A common indirect indicator of need is demographic data. Mustard and Derksen (1997) conducted a study measuring the health status of the Manitoban population. They concluded regions with larger senior populations required more funding because of the increased health costs associated with demographics. The Canadian Institute for Health Information found in 2010 that seniors over age 65 on average accounted for

14% of a provinces population; however, on average, seniors over 65 used over 44% of health-care resources in the provinces (CIHI 2011). Furthermore, a study using the Canadian Community Health Survey attempted to link health-care use to health behaviours and socio-demographics. From a sample of 91,223 adults over the age of 18, the survey concluded health-care usage correlated with the province's demographics (Rosella et al. 2014). Nevertheless, some research suggested the entire elderly population of Canada is not in need of more health-care funding. Roos and Shapiro (1981) studied patient-interview results about ambulatory services and hospital stays in the province of Manitoba, and they concluded on average, the elderly population aged 65 to 86 did not require more in health funding than the younger population (i.e. 1 to 64 years of age). Comparatively, those who were in high age brackets (i.e. over 86 years of age) needed substantially more health-care than the younger population. Marchildon and Mou (2014) used data from the Canadian Institute of Health Information (CIHI) to demonstrate the general relationship among age, sex, and average Medicare cost in the provinces and territories.

Figure 2.1 Provincial/Territorial Government Average Medicare Expenditures by Age and Sex Using the 2010 CIHI Data



Source: Marchildon and Mou (2014)

The figure clearly shows that as one ages the cost of Medicare varies. Infants are associated with high Medicare cost (i.e. the high cost in the age <one category). However, the cost considerably drops after birth and remains steady until the latter years of life. After age 80,

the cost grows quickly according to CIHI (CIHI 2011). These patterns suggest distribution of population age has an impact on Medicare cost.

The data also shows that although there are differences in average Medicare costs between females and males; sex does not have as great an impact on Medicare costs as age. According to CIHI, females on average incur a higher total Medicare cost than males (CIHI 2014). Women cost more than males because women incur an additional cost during the childbearing years and women statistically live longer and tend to have more chronic conditions than men (Blakely et al. 2014; CIHI 2014). In addition, men have higher rates of fatal illnesses than women do, men are more likely to die of heart attacks or strokes, and men are more likely to die because of an accident or commit suicide (Smith 2006). This means the cost of providing health-care for women is extended over a longer period. However, other factors of health suggest that men in some circumstances cost the health-care system more than females. For example, men are more likely to smoke and drink which can lead to major health problems like cancer (PHAC 2013). Men are also likely to avoid medical treatment for conditions despite needing medical attention (Hay 1988). Overall, the evidence suggests that there are significant differences in the average cost between males and females.

In practice, NBFs in developed countries commonly use demographics such as age and sex to indicate need (Rice and Smith 1999). However, demographics indicators fail to capture the unmet needs of those who tend not to seek medical treatment even if they need it. To mitigate the non-representation of unmet needs, England uses a combination of mortality data and demographics. This combination variable is a clinical indicator called the Standardized Mortality Ratio (SMR). An SMR is the ratio of observed deaths (mortality) in a sample population and the expected deaths of the total population. The ratio adjusts by the distribution of demographics of a population. A Standardized Mortality Ratio is a good clinical indicator of need because it shows how a given region compares to the total national population in terms of specific medical conditions. For example, if the standard SMR score for heart attacks of the national reference group is 1.0 but the comparable population in the province of Saskatchewan has an SMR score of 1.7, then the citizens of Saskatchewan are 70% more likely to suffer from heart attacks than the rest of Canada.

Using the age-adjusted mortality in a funding allocation formula, Carr-Hill (1989) found resource distribution was more equitable than distributing based on mortality alone. In a similar

research on the province of Ontario, Beddard and colleagues (1999) examined potential ways policy makers could allocate funds based on health needs. They examined SMRs and found SMRs were a reliable method to measure health-care needs but found the link between an SMR and direct funding unclear. For example, they questioned whether a region with 10% greater SMR than its neighbouring region should receive 10% more in funding. The question posed the issue of meeting need. Although an SMR gives an indication of some relative health need, it does not account for all need. Therefore, the use of an SMR may disadvantage one area where legitimate needs exist, in favour of another area. Because of this unsolved problem, Beddard and colleagues (1999) advised the Ontario government against using SMR to indicate need.

2.1.3 Socio-economic Status

Demographics are useful indicators to identify population needs. However, demographic indicators do not capture all needs within a population. In addition to using mortality indicators, measuring unmet need is possible by examining a population's socio-economical characteristics. Wilkins and Adams (1978) studied Montreal's population and found those in the lowest quintile of education and income had the lowest life expectancy and the highest disease prevalence. Their study showed that education attainment data is a good proxy for measuring health need rather than using disease prevalence data. In another study, Wilkins et al. (1990) studied the mortality rate of urban populations in Canada from 1971 to 1986 and found those in lower income groups had lower life expectancy and greater disease prevalence. The results of the study coincided with the results found by Wilkins and Adams (1978) insofar as the study concluded that income (like education) is a good indicator to measure health need. In his study of two thousand males from the 1978 Canadian Health Survey, Hay (1988) found a male's socio-economic status and health status positively correlated. Hay argued that men tend to under-report health status, making it difficult to conclude how much health resource men need. However, socio-economic status could account for need not captured by sex (Hay 1988). Recently, a Canadian Institute for Health Information study looked at socio-economic status and health status in Canada's Census Metropolitan Areas and found those with lower education and income have greater health-care need than the highly educated and wealthy (CIHI 2008). The CIHI study reaffirmed the findings of Hay, Wilkins, and Adams by demonstrating health need relate to socio-economic status. Scholars have also identified that Aboriginal status correlates with relatively lower socio-economic status and therefore higher health need.

In fact, Aboriginal status alone does not indicate health need (i.e. Aboriginals have more health needs because they are Aboriginal); Aboriginals have more health-care needs because of their relatively lower socio-economic status than non-Aboriginals do (Williams and Sternthal 2010). D'Arcy (1989) found the Canadian Aboriginal population had greater health-care needs than the non-Aboriginal population. The Aboriginal population has a myriad of health disparities caused by poor socio-economic status or the social determinants of health. Cultural, access, and political barriers prevent Aboriginals from accessing the health-care services they need and, therefore, some of their needs remain unmet (Reading and Wien 2009). Aboriginal status can thus serve as a proxy for Aboriginal population's generally more challenging socio-economic condition than the majority of Canadians, and by extension, for their higher portion of health-care needs that remain unmet.

2.1.4 Input Costs

While demographics and socio-economic status indicators illustrate need for health-care services, input costs affect access to health-care and the cost of providing services.

Among input cost indicators, medical technologies and payments for health-care service providers are a necessary cost to the health-care system but they do not reflect need. New technologies and an adequate supply of medical practitioners' improve access to services, but these cost factors are fluid and are subject to government control. Governments pay for public health provision based on the prices negotiated with medical service providers. Governments also choose which technologies to fund. For these reasons, including technologies and salaries of Medicare providers in an NBF may create perverse incentives and is thus not efficient.

Location is an input cost indicator used by many countries with an NBF. Location is an input cost factor because the cost of providing medical services is dependent on service location. Costs generally increase the further a patient is from a major urban centre. Population distribution is inherently different across regions, but governments have an obligation to provide Canadians reasonable access to health-care services regardless of their location. Location is thus an uncontrollable cost factor, which means a location variable, despite its lack of being a need indicator, may be justifiable as an NBF variable because it meets efficiency and equity criteria (CGC 2008).

2.2 Evaluating and Selecting Need Indicators

Utilization, demographics, and socio-economic status are useful indicators to capture population need, but each indicator group alone is insufficient or problematic. Utilization captured realized needs (whether necessary or not), but unmet needs are neglected and over-utilization is included. Demographics indirectly capture realized needs but may also neglect some unmet needs. Socio-economic variables capture some unmet needs, but choosing socio-economic status variables requires caution because including these variables could lead to perverse incentives. Input cost factors are not needs but may affect access to Medicare services. Policy makers should consider these facts when balancing the trade-offs between equity and efficiency in designing an NBF (Magnussen 2010).

According to the equity criteria set up in Chapter 1, selecting need and cost indicators based on equity means looking at the promotion of fairness in accessing Medicare services. A selection of indicators that ensures access to Medicare services does not place limitations on the number of variables chosen. Referring to Figure 1.1, all unmet needs, realized needs, and input cost factors meet the criteria of equity because their inclusion ensures horizontal and vertical equity in access to Medicare services.

Reliance on equity alone creates problems because some equity indicators could induce perverse incentives. For example, the use of socio-economic indicators has the potential to create perverse incentives because government policy can shape indicators. In contrast, indicators such as demographics do not produce perverse incentives. Demographics are free of manipulation and therefore reside outside government control.

Based on the criteria identified in the theoretical framework, the only need indicators that satisfy both equity and efficiency criteria are age, sex, and location. Age meets the criteria of equity because older people have greater need for health-care services than the young do. Sex meets the criteria of equity because women have a greater need for health-care services than men do. Location meets the criteria of equity because the cost of providing Medicare services to Canadians is dependent on location. In addition, the three indicators generate little perverse incentives because age, sex, and location cannot be easily manipulated.

Racial indicators such as Aboriginal status are useful in capturing socio-economic disparities; however, racial indicators serve as a proxy for socio-economic indicators and there is no a direct link between race and health-care need. Aboriginal populations present a unique

challenge, and illustrate a general problem for the inclusion of race into the allocation formula, due to the contentions regarding identification. For example, within the federal legislation governing Indigenous peoples, non-status Indians and Métis persons do not have the same protections and funding that status Indians have (Government of Canada 2010). This becomes more confused when considering that status is based on specific genealogical criteria as determined by the federal government, not identity, or heritage. Therefore, Aboriginal status could be included as a need indicator only when a clearer definition and reliable data about Aboriginal identification become available in Canada.

A possible way to see if an NBF could work in Canada is to examine a country (or countries) that currently use an NBF. By examining other countries that use the needs-based approach, Canadian policy makers can learn from the experiences of other countries and determine if the methods employed by other countries are feasible in Canada. The next section examines the various NBFs used in various countries around the world.

2.3 Needs-based Allocation Formulas in Developed Countries

To design a desirable formula and mitigate potential political risks, policy makers can learn from those who developed their own NBFs and confronted similar trade-offs in equity and efficiency. In particular, Canadian policy makers can study the need indicators used in the needs-based formula for health transfers in other countries and learn how to design a needs-based formula for CHT. Table 2.1 is a comprehensive summary of the need and cost indicators, other than population size, used in NBFs for funding allocation in developed nations.

Table 2.1 Need and Cost Indicators Used in the NBFs of Developed Nations

Country	Formula variables	Program name
Australia	Age, Aboriginal, Location, Socio-economic status	Equalization
Finland	Age, Disability	State Subsidy System
England	Age, Mortality, Morbidity, Socio-economic status, Ethnicity	Resource Allocation Formula
France	Age	Federal Insurance Office Risk Adjustment Scheme
Italy	Age, Sex, Mortality	Regional Resource Allocation System
Netherlands	Age, Sex, Socio-economic status, Urbanization	Central Sickness Fund Board Risk Adjustment Scheme
New Zealand	Age, Sex, Socio-economic status	Health Funding Authority
Northern Ireland	Age, Sex, Mortality, Socio-economic status	Health Board Allocation Formula
Norway	Age, Sex, Mortality	Health Authority Revenue Allocation Scheme
Scotland	Age, Sex, Mortality	Health Authority Revenue Allocation Scheme
Sweden	Age, Socio-economic status	Stockholm County Hospital Resource Allocation Formula
Switzerland	Age, Sex, Region	Federal Association of Sickness Funds Risk Adjustment Scheme
United States	Age, Sex, Socio-economic status	Medicare
Wales	Age, Sex	Health Authority

Source: author's compilation based on Rice and Smith (1999)

Table 2.1 shows that developed countries commonly use NBFs to allocate health-care resources. The table reveals that age and sex are the most prevalent need indicators in these countries. A probable reason is that age and sex account for health-care needs and are free of perverse incentives.

To capture unmet needs due to sex or socioeconomic status, NBFs in some countries go further to include indicators of unmet needs or other unavoidable barriers to access to health-care services. For example, some countries use a mortality indicator, some use a type of socio-economic indicator, and some use a location or region indicator. These countries expanded beyond age and sex indicators because the countries placed a higher value on the principle of equity rather than seeking to minimize potential perverse incentives.

Each existing NBF in Table 2.1 is likely a product of the considerations of the equity and efficiency criteria described above. Although Table 2.1 is useful for policy makers interested in designing an NBF insofar as the table identifies a range of options available to policy makers, policy makers need to know why an NBF exists in the first place and how a country ends up with a particular formula and the associated trade-off between equity and efficiency. This is because

transfer allocation is a zero-sum game and any decision on formula of transfer allocation would create winners and losers. For example, although an NBF that adjusts for age, sex, and location is both equitable and efficient and is partially used in Australia (i.e. Australia does not include sex), it may not be politically feasible in Canada. For example, Marchildon and Mou (2014) found that Ontario and Alberta would lose funds if the CHT adjusted for age and remote location, while Schwartz (2016) found that Ontario, Alberta and Manitoba would lose if the CHT adjusted for age only. The two empirical studies demonstrate that while overall the country benefits from a needs-based formula, some provinces will inevitably lose. Schwartz found that Ontario would lose 0.36% of its funding when compared to the equal-per capita distribution, while Manitoba would lose 1.53%. Alberta would be heavily impacted losing 12.23% in CHT funding.

Therefore, despite the fact that a needs-based formula would support the national standard in Medicare, change to the CHT requires the change be politically feasible and transparent. A detailed analysis of the federal and political context of countries of different choice of transfer allocation formula will help explain why adopting a needs-based formula is possible in one country but may not be feasible in another.

CHAPTER 3

METHODOLOGY

3.1 Drawing Lessons

The theoretical framework and technical composition of health-transfer formulas in other countries are helpful to policy makers who want to design an NBF. To make an NBF feasible, policy makers also need to know if a technical formula is acceptable given the current political climate of a country. For this reason, a comparative study is helpful because policy makers can discover how to balance equity and efficiency concerns, justify formula composition, and gauge the political climate necessary to foster policy change.

This study compares Canada and Australia by observing their history of developing federal transfer allocation formulas. Although the evolution of the federal transfer allocation could relate to many factors, the focus of this study is on the influence of federalism and political institutions on the development of federal transfer allocation formula in the two countries. Regions within a federation are inherently different and without federal support, poorer regions would be unable to provide a comparable level of public services to richer regions. The transfer system in a federation is the most important instrument the federal government uses to reduce the vertical fiscal gap between the two levels of governments, ensure a minimum standard of public services across regions, and promote nationhood. In this sense, federalism and political context is the most important factor that influences the development of federal transfers. In terms of the policy outcomes to be discussed, although the development of federal transfers affects the health outcomes of the population and influences the public-private mix in health financing and the total cost and sustainability of Medicare, the study limits policy outcomes to the direct result of federal transfers – the allocation of federal transfers to each region. The study refrains from making inferences about the other potential policy outcomes because doing so requires rigorous theoretical and empirical studies, which is beyond the scope of this study.

Australia is an ideal comparator for Canada because both countries are federations, members of the British Commonwealth, and constitutional monarchies with similar political structures. The two countries share large geographic landmasses and have Aboriginal populations throughout the country (Watts 2008). However, the two countries have adopted different methodologies to address the vertical and horizontal fiscal gaps present in their

federations. Australia is a highly centralized federation, where the Commonwealth (i.e. the federal government of Australia) holds substantial revenue raising and expenditure power and, in turn, uses that power to influence state policy decision making through transfers. The Commonwealth and state governments have a strong collaborative relationship that extends over many areas of public policy. For example, the Commonwealth and state governments collaborate on ways to improve emergency medical care throughout the country. The Commonwealth provides reward payments if states can reduce wait times for emergency services, which can improve the efficiency of the Australian health-care system (COAG 2011). In contrast, Canada is highly decentralized and leaves health-care policy to the provinces (Boothe 1996). The decentralized nature of health-care has led to differences in services provided to Canadians across provinces and territories. For example, public drug coverage varies across the country. Saskatchewan provides public coverage to senior citizens (i.e. over the age of sixty-five) based on their income from the previous fiscal year. If a senior's drug costs exceed 3.4 percent of his/her annual income, the government pays 100 percent of the total drug cost less the twenty-five dollar maximum payment for each drug (Government of Saskatchewan 2016). British Columbia uses age and income from the previous two years and additional disability benefits to calculate eligibility (Government of British Columbia 2016). If a citizen of British Columbia's drug expenses total three percent of his/her annual income, the government will cover up to seventy percent of his/her drug costs. However, if the British Columbian's drug cost exceeds four percent of his/her income then the government covers 100 percent of the drug costs less the twenty-five dollar maximum payment for each drug. Private drug insurance schemes are different across Canada whereby private coverage is voluntary in provinces except Quebec where legislation requires employers to provide private insurance for eligible employees (Morgan et al. 2015). The example of provincial drug coverage shows that health-care services vary by location and highlights the difficulty in upholding equity and fairness in Canada's universal health-care system. A comparative study of such contextual differences is useful in understanding the development of the federal transfer system in each respective country. It allows policy makers to evaluate if Australia's approach to federal transfers is desirable and feasible in Canada.

Before delving into the transfer systems of Canada and Australia, it is necessary to provide a general overview of the two federal transfer systems. The CHT in Canada and the

equalization program in Australia are the focus of the study; however, these transfers function within the larger transfer system. The transfer system is comprised of other transfers that all work together to achieve the goal of addressing fiscal gaps, but also promote national interest. Table 3.1 provides a summary of the transfer systems in Canada and Australia. Both transfer systems include general-purpose transfers and specific-purpose transfers. The two types of transfers meld together because money received by a government is funnelled into its general revenue fund and therefore a decrease in one type of transfer affects the fiscal capacity of the government.

General-purpose transfers are unconditional, meaning the recipient government is free to spend the funding at the government's leisure. Specific-purpose transfers are conditional, meaning the recipient government must follow a set of rules on spending the transfer. Canada and Australia share a general-purpose transfer (also known as equalization) whereby the federal government allocates a set amount of funding to the recipient government annually. Canadian equalization is determined based on the revenue-raising capacity of provinces, while Australia uses both the revenue-raising capacity and the expenditure needs of states in its allocation of equalization funding. Specific-purpose transfers are for specific social policies such as health-care and education. Canada imposes conditions on the CHT based on the five principles of the CHA and imposes the condition of having a zero-residency requirement for the Canada Social Transfer (CST). Zero-residency means a province cannot impose a minimum waiting period for a citizen to receive social benefits. For example, if a Canadian moved from Saskatchewan to Alberta, and was on social assistance, the province of Alberta cannot restrict the Canadian from receiving social assistance because the person has not lived in Alberta. Australia's specific-purpose transfers are more complex because the transfers are for specific initiatives such as improving railway or road infrastructure. The Australian government chooses initiatives to fund based on partnerships agreed to by the federal (Commonwealth) and state governments. In terms of health-care, Australian specific-purpose payments are for infrastructure, combating wait times, and improving health outcomes in both hospitals and communities.

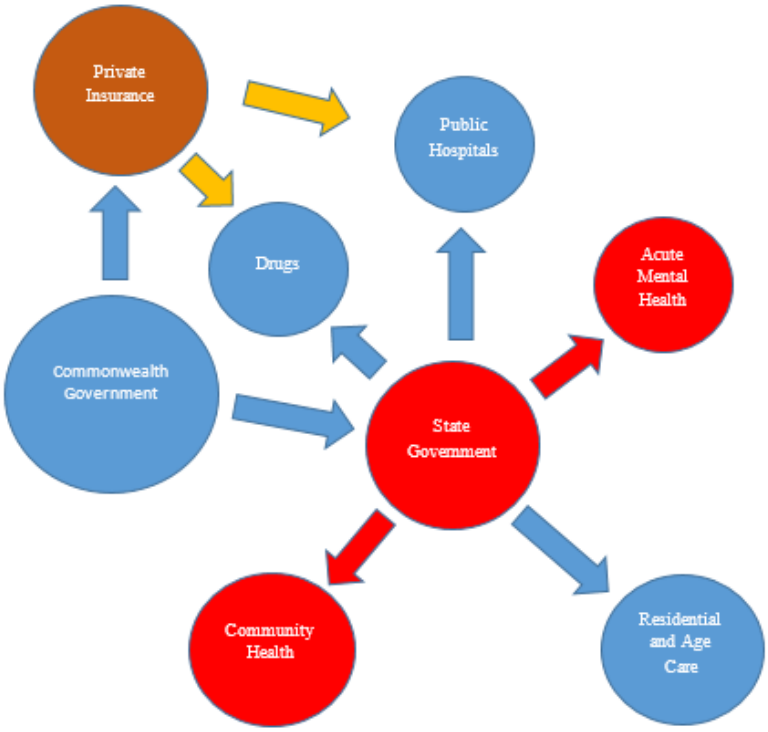
Table 3.1 Federal Transfers in Canada and Australia

	Canada		**Australia**
General-purpose transfers			
Name	**Equalization**		**Equalization**
Source revenue	General revenue		General sales tax (GST)
Conditions	N/A		N/A
Allocation basis	Revenue-raising capacity		Full fiscal equalization
Administrative body	Federal government		Commonwealth Grants Commission
Review	Every five years		Every five years
Specific-purpose transfers			
Name	**Canada Health Transfer**	**Canada Social Transfer**	**National Health Reform Funding, Schools, Disabilities, Affordable Housing, Skills and Workforce Development**
Source Revenue	General Revenue		General Revenue
Conditions	Five principles of the Canada Health Act	No residency requirement	Conditions set by the Commonwealth on funding purposes*
Allocation Basis	Equal per capita		Ad Hoc
Administrative body	Federal government		Commonwealth government
Review	Ad hoc		Ad hoc

*Conditions set by the Commonwealth government in consultation with state governments to achieve desired outcomes. In the case of health-care, wait times and health outcomes predicate the amount given in transfer payments.

To narrow the focus of this study, this comparative analysis examines the equalization program of Australia and the CHT of Canada. Equalization and CHT are comparable across these two countries for three reasons: first, both transfers attempt to help subnational governments meet health-care needs. Equalization is the largest federal transfer for financing state health-care in Australia (CGC 2008). CHT is the largest federal transfer that supports the provinces and territories in providing Medicare services in Canada. Second, the two programs have a similar objective. The policy objective of equalization in Australia is to ensure Australians have comparable access to public services, including health-care services (CGC 1995). The policy objective of CHT is to ensure a minimum national standard in Medicare. Third, equalization in Australia and CHT in Canada are allocated to all states/provinces and territories.

Figure 3.1 Roles of Financial Transfers in the Australian Health-Care System



Note: Red circles and arrows indicate state transfers for health services, blue represent Commonwealth transfers, and orange represent a mixture of Commonwealth and private-insurance transfers.

Before discussing the intricacies of the two federal transfer systems, it is important to establish a general understanding of how the health-care systems function in each country. Australia has a two-tiered health-care system (AIHW 2012). All Australian citizens have access to public health-care (i.e. physicians and hospitals). However, private insurance holders or patients willing to pay out-of-pocket fees can access private doctors and private hospitals. Payment for health-care services is dependent on the service provided by public or private insurance. If a patient elects to use public health-care, the cost to the patient is zero dollars. If the patient elects to use private services, the government pays seventy-five percent of the cost while the patient pays twenty-five percent (i.e. through insurance or out of pocket). The benefit to having private insurance is patients have quicker access to services. In addition, private insurance holders can choose specific hospitals and physicians. Public patients do not have a choice of hospital or physician and are subject to long waiting lists for treatment. The private

system covers a wide assortment of services ranging from hospital and physician services to dental, optometry, physiotherapy, and elect surgeries (Hall 2016).

Australian Medicare is a federal jurisdiction, while states control certain areas of health-care. The Commonwealth pays for its portion of public health through general revenue while state government pays for another portion of Medicare using their own general revenue supplemented by Commonwealth grants (i.e. equalization). The Commonwealth pays for most physician and hospital services while states pay for community services such as home care services. However, both levels of government encourage those who are able to pay medical services to opt for private service provision whether through private insurance or out of pocket fees. The government argument for suggesting private services is to alleviate the pressure on public health-care (Hall 2016). The Commonwealth government encourages Australians to purchase private health insurance and uses a 'carrot and stick' method to entice citizens towards private care. The Commonwealth offers tax breaks to high-income earners who purchase private insurance. On the other hand, Australians in the top income tax bracket who did not purchase private health insurance has to pay a special income tax levy.

Figure 3.1 illustrates the role of health transfers in the Australian health-care system. The figure demonstrates that the Commonwealth government pays for the majority of public health-care services in Australia, known as Medicare (including public hospitals, drugs, and residential long-term care), and subsidizes private-insurance users who use private insurance to pay for physicians, private drugs and hospital services. State governments pay for services such as acute mental health-care and community health-care out of state budgets (part of which comes from the equalization transfer). States also pay for Commonwealth health services but the money used to fund those services comes from the Commonwealth. In addition to providing states with money to pay for Medicare, the Commonwealth also transfers funds in the form of Specific Purpose Payments (SPP). These earmarked funds are for specific-purposes such as reducing wait times and improving health outcomes. Some SPP are bi-lateral (i.e. between one state and the Commonwealth). Bi-lateral agreements focus on building infrastructure in specific states. For example, the Commonwealth created a SPP for Tasmanian infrastructure projects in 2015, while other states were not eligible for SPP infrastructure grants (CGC 2015).

The Canadian health-care system also has both a private and public component. Private insurance cannot cover services already provided by Medicare (i.e. Canadians cannot access

private hospitals or private physician services), but private insurance can cover health-care services such as prescription drugs, optometry services, physiotherapy, and dental services. For example, prescription drugs are generally not free to Canadians with the exception of some seniors and low-income individuals who are eligible for provincial drug plans (Morgan et al. 2015). The rest of the Canadian population uses either private prescription drug insurance plans or pay from their own pocket for drugs (Donaldson et al. 2004).

General revenue of provincial/territorial governments pays for Medicare that includes most physician and hospital services. Access to Medicare is free at the point of use to Canadians. Canada also has a sort of two-tiered health-care system whereby some services are provided by both public and private systems. Citizens can access diagnostic services such as MRIs through private clinics paid by Workers Compensation (Marchildon 2006). However, Canada does not have a two-tiered system like Australia because Canadians cannot access physician or many hospital services through private insurance.

Medicare in Canada is a provincial jurisdiction but the federal government contributes financially to Medicare through the CHT. Section 92 of the constitution gives the provinces the power over "hospitals" which is broadly interpreted as health-care because, in 1867, health-care was provided in only hospitals (Government of Canada 1982). The federal government has so-called spending power, which allows the federal government to spend its tax revenue wherever it wants, including in areas of provincial jurisdiction. Although spending power is unspecified in the constitution, there is a broad interpretation that section 36(1) c legitimizes federal spending power. Section 36(1) c requires the federal government to ensure Canadians have access to essential public services (Richer 2007). Provinces generally view the federal government's spending power as a means to intrude on provincial jurisdiction, but the Supreme Court made it clear that the federal spending power is not an intrusion on provincial jurisdiction and the federal government is allowed to attach conditions to any transfer it makes to the provinces (Braën 2004; Butler and Tiedmann 2013). The difference between the transfer systems in the two countries is that Canada's federal government transfers money to the provinces/territories, where the funds finance provincial/territorial Medicare schemes, while Australia's Commonwealth government transfers money to the states to pay for Commonwealth Medicare responsibilities and makes SPP through partnerships with the states (Le Goff 2005). Although the Commonwealth government in Australia subsidized up to thirty percent of the total cost of private insurance to incentivize

citizens to opt for private insurance (Commonwealth Fund 2016), the majority of federal healthcare funding supports public healthcare (AIHW 2012). Despite the difference in the public-private mix of health care in the two countries, CHT and equalization in Australia are comparable because both transfers are the main instruments that the federation used to uphold a national standard of Medicare services (Government of Canada 1985; CGC 2015).

3.2 Historical Institutionalism

This comparative study uses a historical-institutionalism perspective in its examination of equalization in Australia and CHT in Canada. Historical-institutionalism attempts to explain how institutions form. Historical institutionalists argue that institutions form incrementally over time and that institutions sometimes drastically change through radical revolution called punctuated equilibrium (Campbell 2004). A historical-institutionalism lens is helpful for policy makers because the theory addresses why and how policies change in a given context. Using this theory, policy makers can understand how and why Australia designed an NBF, draw lessons from the study, and translate that knowledge into a Canadian context. Thus, historical-institutionalism provides a foundation for contextualizing the Canadian and Australian transfer systems.[6]

Learning from the Australian experience through comparison is the purpose of this comparative study. Advantageously, scholars have identified a number of methods in transferring policies from one country to another (Bennett and Howlett 1992; Rose 2005; Dolowitz 2009). Bennett and Howlett (1992) identify three types of policy-transfer learning: government learning, social learning, and lesson drawing. Each type has a different purpose: government learning changes governance structure. A change in governance structure could be the change in jurisdiction of health-care (i.e. change health-care from a provincial jurisdiction to a federal jurisdiction). Social learning examines shifting social paradigms or the ideological shift in Canadian values (i.e. a change in how Canadians view their health-care system). Lesson drawing concerns the change or adjustment to a policy program while still maintaining the policy objective. Among the three types of policy-transfer learning, government and social learning are inappropriate methods of learning from the Australian experience. Although Canada and

[6] To establish the context, the study uses various sources, ranging from government documents, peer-reviewed journal articles, commission reports, and news articles. Government statistics and historical information on transfer development come from relevant government websites, and data comes from databases of the Australian Bureau of Statistics and Statistics Canada.

Australia share many similarities, the two countries are also fundamentally different in division of powers and views about their federalism systems. It is not feasible for Canadian policy makers to change the jurisdiction of health-care (i.e. division of powers) or to propose a change in values towards federalism. Because the CHT is a government *program*, lesson drawing is an appropriate method. Lesson drawing is appropriate because policy makers can learn from the experiences of Australia and improve the current CHT to ensure it upholds the values and expectations Canadians have of their Medicare system.

The comparative study follows a simplified version of the comparative study procedure outlined by Rose (2005). Rose's (2005) book, "Learning from Comparative Public Policy: a Practical Guide", provides a guide for conducting a comparative analysis that draws lessons about enacting policy change. The literature on lesson drawing is limited; however, Rose provides a useful tool for policy makers interested in lesson drawing. In this study, step one is to explore the history of Canada's federal transfer for Medicare. It examines the context of establishing Medicare in Canada and lays out the history of the federal-provincial relationship from the end of the Second World War to the 2015 election of the Trudeau Liberal Party. Step two reviews the history of Australia's federal transfer for Medicare. It examines the Australian fiscal federalism from federation of Australia in 1901 to the 2015 Commonwealth Grants Commission review of equalization. Finally, step three, a summary of step one and two, is to compare the Canadian experience and the Australian experience. This step also identifies the strongest lesson Canadian policy makers can draw from the Australian experience.

CHAPTER 4
A COMPARATIVE STUDY OF THE CHT AND AUSTRALIAN EQUALIZATION

4.1 The Canadian Story

In a federation, transfers reinforce a sense of nationhood by providing a minimum standard of public services (Hertzman 1990). The current federal transfer systems are the results of years of incremental changes in both Canada and Australia. Many of these changes are the result of negotiations between both levels of government who want to protect the national interest while respecting sub-national jurisdiction authority. The Canadian federal transfer system is the product of institutional evolution and political decision-making that began with a highly collaborative relationship between the federal government and the provinces, to a relationship that saw clear divides between federal and provincial roles. Transfers for Canadian Medicare underwent three major changes: program inception in 1957, the creation of Established Program Financing (EPF) in 1977, and the equal-per-capita formula change in 2014.

Change in the federal transfer system first occurred after the Second World War, when Canadians demanded the restructuring of the country's social programs, including health-care. The Canadian *Constitution* had given the provinces jurisdiction over Medicare since Confederation in 1867, but this constitutional division of powers had its limits, especially given that the federal government had major taxation powers in comparison to the provincial governments. For example, the federal government accrued the power to tax income during the war. With greater financial capabilities, the federal government had the opportunity to shape national social policy, while the provincial governments did not.

In 1946, then Prime Minister William Lyon Mackenzie King called the provincial premiers together to formulate a national Medicare scheme, on the condition that the federal government retained full control over income taxes and the other tax areas it had appropriated during the war (Gray 1991). The western provinces agreed and were prepared to yield tax autonomy to gain a national Medicare scheme. Quebec and Ontario, the most populous and financially strongest provinces at the time, opposed the perceived federal intrusion on provincial autonomy. Despite King's desire to create a national Medicare scheme, the parliamentary cabinet convinced the Prime Minister that Canada should not adopt national Medicare because the cabinet believed economic hardships were inevitable after the war. At the end of the First World War, Canada went into a deep recession during the Great Depression. The federal cabinet feared

a weak economy could return at the end of the Second World War and was therefore not interested in spending money on major social programs (Gray 1991).

The lack of federal leadership, strong opposition from Ontario and Quebec, and lack of willingness to institute national Medicare led provinces to act on their own. Beginning in Saskatchewan in 1947, the province implemented a universal hospital-services plan called Hospitalization. British Columbia adopted the same model in 1949, and Alberta followed suit in 1950 (Marchildon 2006). Observing the growing public support for national health-care, the federal government eventually adopted a national Medicare program in 1957 after intense negotiations with Ontario (Gray 1991). To encourage provinces to join the national Medicare program, the federal government provided up to 50% of funding for provincial Medicare schemes, and the arrangement lasted until 1977. One by one, the provinces joined in the cost-sharing mechanism, with Quebec being the last to join in 1961. Quebec's resistance to federal interference in areas of provincial jurisdiction quieted when the Liberals gained power in Quebec at the beginning of the Quiet Revolution in the 1960s. Quebec opted out of the national scheme, but received cost-sharing funding from the federal government. Federal funding remained because Quebec met minimum federal standards on providing Quebecers access to medically necessary services and the federal government wanted to ensure a minimum national standard of Medicare. This option was available to other provinces, but only Quebec used this course of action to demonstrate its provincial autonomy (Lecours and Béland 2009).

By 1977, Canada had a national Medicare scheme jointly funded by the federal and provincial governments, with each jurisdiction equally funding Medicare in the provinces. However, rapidly increasing Medicare costs concerned both levels of government. The federal government, at the time led by Pierre Trudeau's Liberals, argued the ideal method of decreasing the federal costs for Medicare was to abandon cost-sharing transfers in favour of block cash grants (Gray 1991). The provinces unanimously opposed the federal government's recommendations. Ontario, Quebec, and Alberta agreed with reducing the federal role in Medicare, and argued for tax room, claiming the federal government had fulfilled its role of establishing a national program and if provided tax room, provinces would be capable of dealing with their own constitutional jurisdictions. British Columbia opposed the change for fear of budget caps, whereas Saskatchewan saw the withdrawal of federal contribution as a threat to national standards. The compromise was a block transfer that included half tax-points transfer

and half cash transfer under a new program called Established Programs Financing (Telford 2003). The cash portion of Established Programs Financing (EPF) was indexed to growth in the Canadian economy. The tax-point portion was a fixed thirteen and a half percent of personal income tax and one percent of corporate income tax collected from a province/territory and allocated from the federal government to the province/territory. The government distributed the total EPF on an equal-per-capita total tax point plus cash basis, which meant wealthier provinces received less cash transfer on a per capita basis. This compromise was an attempt to balance the federation so that less wealthy provinces received more in cash transfer than wealthy provinces on a per capita basis. The result of this policy change was a reduction of federal power over income taxation, giving the provinces more autonomy over their own source revenue and spending in provincial jurisdictions, including Medicare. Despite the change in form of federal funding, the existence of the redistributive cash transfer helped preserve a minimum national standard in Medicare.

Through EPF in the 1970s, the federal government found a way to contain its ballooning cost of Medicare. The provinces also looked for ways to control their own costs and many settled on implementing user fees. Medical professionals, labour unions, and Canadian citizens, however, opposed user fees because of what they perceived to be the deterioration of universal Medicare. The 1980 Hall Report criticized the user fees as contradictory to the principles of Medicare, which gave the federal government political ammunition to blame the provinces for eroding Canada's national standard in Medicare (Gray 1991). The report claimed Canadians wanted a universal health system free at the point of use. In turn, the federal government passed the *Canada Health Act* in 1984, enshrining the five principles of Medicare, which became federal conditions provinces had to meet to receive EPF. Shortly after its passage, the provinces slowly removed user fees. The introduction of EPF and the CHA demonstrated two major shifts in the federal transfer system. First, the federal government desired to remove itself from a costly Medicare scheme, leaving the provinces to manage costs. Second, the federal government, with the support of Canadians, became a protectorate of national Medicare by using financial incentives.

In 1995, the federal government scaled back its transfer spending and changed EPF into the Canada Health and Social Transfer (CHST) (Rangarajan and Srivastava 2004). This change was different from the change in the 1970s. In 1977, the federal government changed from cost

sharing to block funding without decreasing the total amount of cash transfer. In 1995, block funding remained for the CHST, but total cash transfers endured cuts. The provinces claimed the federal government balanced its books by exploiting the provinces (Madore 1997). Tensions were high between the two levels of government and the provinces claimed a substantial vertical fiscal gap existed, but the federal government denied any gap (COF 2006).

The cut to federal health and social transfers caused major tensions between the federal government and the provinces and Canadians worried about the future of their Medicare system. Alberta challenged the national standard of Medicare when Alberta imposed user fees on out- of-hospital diagnostic services. The federal government threatened to withhold CHST funding to Alberta if it did not remove user fees. The province did not comply with the federal government's requests until 1998 when public outcry against user fees persuaded the Alberta government to reverse its policy (Gray 1991). Although the federal government was unable to uphold the national standard through financial leveraging, the people of Alberta successfully upheld the national standard by demanding their Medicare system remain universally available to all citizens regardless of ability to pay.

The tensions felt by the people in Alberta spread across Canada and Prime Minister Jean Chretien called for a royal commission on health. The report of the commission called *Building on Values: The Future of Health Care in Canada* (i.e. the Romanow Commission report) clearly demonstrated that Canadians wanted to preserve their national Medicare system based on equity, fairness, and need. The report's findings coincided with the 1980 Hall report and showed that Canadians continued to value the same principles of Medicare. The commission highlighted that Canadians viewed their Medicare system as a right of citizenship and emphasized the strong desire to keep the system public. Canadians wanted to keep their Medicare system public because Canadians view Medicare as superior to the United States health-care system. In terms of federal funding arrangements, the commission recommended that the CHST be split into a single health transfer (i.e. the Canada Health Transfer) and a single social transfer (i.e. the Canada Social Transfer). The commission also suggested that the federal government provide stability in funding and recommended a new formula that guaranteed approximately twenty-five percent of total Medicare spending, with a fixed escalator. The Commission implied a needs-based formula be used when it stated the federal government should consider the expenditure

costs of Medicare, but the commission did not make a specific recommendation on how to allocate federal dollars on the basis of need.[7]

The commission's work led to the First Ministers (the premiers of the ten provinces and then Prime Minister Paul Martin) to meet in 2003 and discuss a national strategy on securing Canadian Medicare. The governments agreed in principle to safeguard Medicare for Canadians. The ministers did not incorporate most of the Romanow Commission's recommendations save for the splitting of the CHST into the CHT and CST, and establishing a predictable and stable total funding for the CHT using a six percent escalator. The ministers focussed on tackling wait times and increasing the supply of medical providers in Canada. The ministers believed that increased funding would improve Medicare and the federal government committed forty-one billion dollars over ten years in new funding to the provinces. The federal and provincial governments were not interested in debating tax allocations possibly because of the importance placed on injecting new funding into Medicare.

Prime Minister Paul Martin and the ten premiers signed a ten-year accord in 2004 to improve Medicare for Canada (CICS 2004). The funding formula for the new CHT did not change because the federal government recognized the importance of including tax points in the formula. The federal government argued that tax points were important to the CHT because the federal government respected the provinces autonomy – tax points allowed provinces to spend raised revenue on provincial priorities. The federal government further argued that the tax points were important in recognizing Quebec's asymmetric position on Medicare (i.e. Quebec wanted more autonomy and tax points allowed for a more autonomy) and the system of tax points and cash transfer was a mutually acceptable system (Health Canada 2004). Although the provinces largely welcomed the injection of federal transfers to Medicare, increased funding did not achieve all the outcomes that the accord was supposed to achieve. In a progress report issued in 2013, the Health Council of Canada gave a scathing review of the government's plan to reduce wait times and concluded that the results were unclear and overall wait times did not go down but remained on a small incline (HCC 2013). The report suggests that the efforts of the federal and provincial governments to address specific Medicare issues did not produce positive outcomes (i.e. a reduction in wait times). Although the ministers claimed they would work

[7] The commission made forty-seven recommendations. The boldest of recommendations were to expand the scope of Medicare to include home care services and a national prescription drug plan.

toward a national prescription drug plan, and look into introducing home care into Medicare, governments did not act and Medicare remains confined to hospital and physician services.

While the provinces met with the federal government to discuss the ten-year health accord, the provinces also established the Council of the Federation in 2003. The Council of the Federation (COF) is a body composed of all provincial and territorial premiers without representation from the federal government. COF's initial goal was to find methods of fixing Medicare (Collins 2011). The COF achieved major milestones such as the national agreement on drug pricing whereby the provinces negotiate as a block with major pharmaceuticals on drug pricing. Although each province retains its own drug formulary, the collective action by the provinces on drug pricing has demonstrated a potential for the provinces to collaborate on Medicare issues.

On the other hand, during the period from 2004 to 2007, the tensions over equalization entitlements reached new heights. The federal government achieved budgetary surplus and the provinces believed the federal government had done so by cutting transfers to the provinces. The provinces and the federal government agreed to change the equalization formula to alleviate the political tensions between the governments. In 2006, the Council of the Federation (COF) commissioned a study to examine the "fiscal imbalance" in Canada (COF 2006). The committee based its findings on the principles of transparency, accountability, adequacy, predictability, equity, and fairness. The panel recommended a new formula for equalization to provide stability. The panel also recommended avoiding bi-lateral agreements like the offshore agreements between the federal government and the province of Newfoundland and Nova Scotia (COF 2006). In addition to addressing equalization, the panel recommended the CHT and CST be allocated on an equal-per-capita cash transfer only basis. By recommending the CHT and CST be distributed on an equal-per-capita cash basis, the advisory panel felt that the allocation process would be highly transparent and predictable. Furthermore, the panel recommended dropping tax-point transfers to avoid the confusing process of calculating tax-point transfers and cash transfers for CHT and CST.

Shortly after the COF commissioned the report, the Conservative Party led by Stephen Harper gained power and pledged to end the vertical fiscal gap by working with the provinces to rebalance the federation. In 2007, Stephen Harper's government promised to fulfill the

recommendation of the COF report on allocating the CHT.[8] Starting in 2014, the CHT changed to an equal-per-capita cash allocation and dropped the tax-point transfers. The Conservative government took a different approach to federalism and unilaterally changed the CHT without consulting the provinces and territories. The change stood as a contradiction to the precedent set by the Liberal government in 2004 when it worked collaboratively with the provinces on the health accord. The implications of this change to equal-per-capita allocation meant that less affluent provinces received less funding. Under the old CHT formula, a residual equalization existed which entitled provinces with lower-than-average provincial income to receive more cash transfer on a per capita basis. The new CHT formula dropped residual equalization. The change to the CHT formula and a lack of adjustment to equalization made it more difficult for less wealthy provinces to provide comparable Medicare services (Marchildon and Mou 2014). The change in 2014 reveals a diminished role of the federal government in Medicare, resulting in a shift of federal-provincial Medicare relations where the provinces increased autonomy in dealing with Medicare and the federal government assumed a minor role.

Another change to the CHT announced by the Harper governments is an adjustment to the annual escalator of the total federal budget for CHT. The ten-year accord committed the federal government to increase CHT funding by six percent annually, which sustained its role in securing a national standard. Starting in 2017, the annual increase will change from six percent escalator to the indexed growth in the economy or a minimum of three percent. The change meant the federal contribution to the total budget for Medicare is likely to decrease over time given the fact that Medicare cost grows faster than the economy. Although the total CHT continues to increase annually, as a percentage of the total cost of Medicare, the CHT is shrinking, which means the federal government has level fiscal leveraging in Medicare. If the federal government's share of the Medicare cost continues to decrease, provinces are less likely to adhere to the conditions of the CHT because the federal government's withholding of funding has less impact.

Table 4.1 provides a summary of the changes in the federal health transfer formula over time. The table illustrates how the federal and provincial governments shared the burden of Medicare and collaborated towards a national system, while respecting provincial autonomy. The

[8] The government delayed changes to the CHT until 2014 because the health accord signed by the federal government and the provinces in 2004 did not expire until ten years later.

table also reveals how federal and provincial governments eventually drifted apart when the federal funding mechanism changed from cost sharing to both cash and tax transfers, arriving at a cash-only contribution.

Table 4.1 History of Allocation Formulae for Federal Transfers for Medicare in Canada

	1957-1976	**1977-1995**	**1996-2003**	**2004-2013**	**2014-Present**
Program name	Hospital Insurance and Medicare	EPF	CHST	CHT	CHT
Allocation formula	50/50 cost sharing between federal and provincial/territorial governments	Equal-per-capita total cash and tax-point transfer	Equal-per-capita total cash and tax-point transfer	Equal-per-capita total cash and tax-point transfer	Equal-per-capita cash transfer

The story of Canada's health-transfer changes reveals a combination of political action and inaction, as well as long-standing institutional constraint. The federal government initially resisted national Medicare because of interest in dominating income taxation powers and staving off a perceived post-war depression. Meanwhile, political pressure from Canadians placed provinces in a difficult position because they could not fund demands for Medicare without additional aid. The federal-provincial partnership allowed provinces to meet Canadians' demands and retain autonomy over Medicare.

The establishment of EPF demonstrated the federal government could change its funding schemes despite provincial objection. Although EPF was a compromise system, the change from cost sharing demonstrated the federal government's substantial financial power. The federal government was able to reduce its ballooning financial burden without fear of reprisal because total federal contribution did not decrease. Provinces did not welcome the CHST in 1995 because the federal government drastically cut transfers. The ten-year health accord was a welcomed change by the provinces and the federal government. Both governments were satisfied that they could work together to improve Medicare. However, the results of the influx of new federal funding did not yield the results the governments desired over the ten-year period. . Although total funding for CHT increased, the CHT allocation formula did not change in 2004 because the federal government believed the tax points and cash contributions were acceptable to the provinces and therefore did not want to change the status quo, and there were no specific recommendations to adopt the needs-based approach in the Romanow Commission. The change

in 2014 to an equal-per-capita formula, removing the tax-point transfer, is the final piece in the story of the federal government's slow withdrawal from the Medicare arena. Although the CHT budget continues to rise, federal contribution is low and declining when it comes to total spending on Medicare. This slow decline diminishes the ideal of the federal government in upholding the national standard of Medicare and puts further pressure on less affluent provinces to meet Medicare needs.

The gradually diminishing role of the federal government in Medicare is not consistent with the expectations Canadians have of their Medicare system. Canadians expect their provincial and federal governments to work together to preserve Medicare for all Canadians. The Canadian Medical Association revealed in 2016 that Canadians prioritize national Medicare above other social programs (Canadian Medical Association 2016). Current Canadian attitudes on Medicare confirm the points made by the Romanow Commission over a decade ago. Canadians still view their Medicare system as a national symbol of citizenship and want their governments to work together to preserve it, however, Canadians are not optimistic the federal and provincial governments will make substantial change to Medicare (Canadian Medical Association 2016). Currently, there is interest in invigorate a collaborative relationship between the federal government and the provinces. The federal Liberal party pledged during the election of 2015 that it would negotiate a new health accord with the provinces (LPC 2015). The provinces have largely welcomed the federal government's interest in Medicare, and the provinces of Ontario and Quebec have called upon the federal government to amend the CHT to consider age as a need indicator. Beyond funding allocations, the provinces and federal government have not specified what a new health accord could look like, however negotiations are slated for the fall of 2016 (McGregor 2016).

4.2 The Australian Story

Whereas Canada developed into a highly decentralized federation over time, Australia has evolved into a highly centralized federation. Fiscal federalism, punctuated by major events, evolved gradually in Australia, setting the country on a path towards centralization and strong cooperation between the Commonwealth (the national government) and state governments (sub-national governments). The major events signalling Australia's drive towards centralization and collaborative federalism were the establishment of the Commonwealth Grants Commission, the

Uniform Tax Act, "new federalism," the introduction of the Goods-and-Services Tax (GST), and the establishment of the Council of Australian Governments (COAG).

The major fiscal disparities in Australia are similar to those in Canada today. For example, geographical dispersion of population varies greatly across states, as shown in Table 4.2.

Table 4.2 Distribution of Population in Australia in 2012

State/Territory	Total Population	Percentage of Remote Population	Percentage of Population over age 65
New South Wales	7,290,345	1.0%	16%
Victoria	6,623,492	0.0%	13%
Queensland	4,560,059	3.0%	14%
Western Australia	2,430,252	7.0%	14%
South Australia	1,654,778	4.0%	18%
Tasmania	512,019	2.0%	18%
Northern Territory	234,836	44.0%	7%

Source: Australian Bureau Statistics 2015

When the six Australian states confederated in 1901, they quickly recognized major fiscal disparities existed across states and called on the Commonwealth to act. The Commonwealth government decided to transfer three-quarters of its raised general revenue to the states through a single equal-per capita transfer.[9] The states of Western Australia, South Australia, and Tasmania complained the equal-per-capita transfer was insufficient to meet their financial needs and that confederation created more economic problems for them than did being independent. The Commonwealth abandoned the equal-per capita formula in 1910 and instead allocated funds to poorer states (claimant states) based on demonstrated fiscal needs (CGC 1995). Richer states (i.e. non-claimant states) did not receive Commonwealth funds. The Commonwealth believed that the fiscal deficiency of the claimant states would disappear over time and therefore sought temporary solutions to a perceived temporary problem.

[9] The equal-per capita transfer is not to be confused with equalization. Equalization did not come into existence until 1933 when the Commonwealth Grants Commission determined its allocation based on need.

To meet state fiscal demands, the Commonwealth appointed committees to allocate funds to the states. States appointed their own committees to lobby the Commonwealth committees for funding. State committees would argue that they could not provide necessary public services because they did not have sufficient revenue (Clemens and Velduis 2013). The process was ad hoc, and did not satisfy the states because the states believed the Commonwealth committees made biased decisions (Collins 2011).

The ad hoc process ended when Western Australia threatened secession, and the Commonwealth agreed to an independent commission responsible for grant allocations. Western Australia believed that joining in union with the other Australian states caused fiscal disparities. Western Australia believed federal transfers were insufficient to meet state demands and decided that Western Australia would be economically stronger if remaining outside the Australian union. The Commonwealth convinced Western Australia to stay in the union and promised a renewed effort to promote the interests of Western Australia and to appoint an independent commission responsible for meeting state needs. The union was preserved, and the Commonwealth Grants Commission (CGC) was created in 1933 (CGC 1995). The Commonwealth Grants Commission was satisfactory to Western Australia and other states because the CGC was impartial and made its recommendations without Commonwealth political input.

The CGC became the independent arbiter responsible for the allocation of the new unconditional transfer called Equalization. The Commonwealth Grants Commission methods were intended to "ensure that a claimant State had the financial capacity to provide the same range and quality of services as the standard States, as long as it imposed the same range of taxes and charges at the same rates as the standard States" (CGC 1995, xiv). A claimant state was a recipient of federal transfers. The standard states were the two richest Australian states, New South Wales and Victoria (CGC 1995). Wealthy states were not claimant states and therefore did not receive transfers (the situation is the same in Canada whereby provinces that are more affluent do not receive equalization payments). Adhering to this principle ensured a vertically equitable approach to financial management and the preservation of the federation.

The preservation of the federation in 1933 created stability in Australia, but the Second World War challenged the stability. The Uniform Tax Act, passed in 1942 (amended in 1976), marked a watershed moment when the Commonwealth assumed major financial power over all

income taxes. Prior to the Uniform Tax Act 1942, the Commonwealth and state governments jointly collected income taxes. The Uniform Tax Act 1942 allowed the Commonwealth to be the sole collector of income taxes. The states challenged the constitutional validity of the Uniform Tax Act and appealed to the Australian High Court for legal interpretation. The High Court ruled the Uniform Tax Act legitimate in 1942, granting the Commonwealth power to collect income taxes and transfer revenue to the states using grants. The High Court cited *Section 96* of the *Constitution* whereby the Commonwealth could make any grant it wished to the states, provided the states accept the grant (Twomey and Carling 2014). The shift in tax allocation meant the Commonwealth collected the majority of tax revenue, while states had access to smaller tax bases such as stamp and land taxes. The revenues collected by the Commonwealth outweighed its expenditure need, while state tax revenue was insufficient to meet the growing expenditure need. The court ruling meant states became dependent on Commonwealth government grants. State dependence on Commonwealth grants meant states had to cooperate with the Commonwealth, and the Commonwealth was able to exert its power in areas of state jurisdiction for the purposes of advancing national interest. The watershed moment of passing Uniform Tax Act thus set up a path towards a collaborative relationship between the Commonwealth and the state governments because this was a relationship of necessity given that the states were dependent on Commonwealth grants.

By 1946, the Commonwealth collected over eighty percent of all tax revenue but was responsible for fifty percent expenditure needs (Dollery 2001). In 1946, the Commonwealth further expanded its expenditure role by assuming more responsibility for social programs, including hospital insurance and pharmaceuticals (which became Medicare), and pensions (Gray 1991). In 1946, a national referendum occurred because Victoria challenged the Commonwealth government when the Commonwealth established a national pharmaceutical benefit scheme. Under the scheme, the Commonwealth government would provide free medicines from licensed pharmacists. Victoria challenged the legislation claiming the Commonwealth was intruding on state jurisdiction. The High Court could not agree on a ruling. The Commonwealth acted by asking the Australian people through a referendum if pharmaceutical benefits should be a Commonwealth jurisdiction or a state jurisdiction. Australians voted in favour of the Commonwealth government and section 51 became part of the constitution (Gray 1991). The

referendum gave the Commonwealth legitimacy to advance the national interest and accrue more responsibility for health-care.

The Second World War and the period after the war allowed the Commonwealth to retain tax power and shift the country further towards centralization. Over time, however, subsequent Liberal governments challenged the balance. The defeat of the Whitlam Labor Government by the Liberal Fraser Government in 1975 marked an important change in Australian federalism, in which the Commonwealth adopted "new federalism" (Saunders and Wiltshire 1980).[10] New federalism argued that the role of government was too large and had been increasing since the Whitlam Government in the 1960s (Dollery 2001). The Liberal Fraser Government's ideology was to cut government spending through privatization of health-care and other social services. Privatizing areas of health-care across Australia was possible because the Commonwealth controlled major areas of health-care and therefore if the Commonwealth changed its health-care policy, it affected the entire country. Whereas, if a state like Victoria changed its policy on health-care, it would only affect Victoria. Australian Medicare was also a new program (introduced in 1974) and citizens had not firmly accepted that health-care had to be public. As a result, the Fraser government was able to introduce private health insurance in 1975 without major political upheaval (Gray 1991).

With the partial privatization of health-care in 1975, the Fraser Liberal government opposed the previous Whitlam Labor government's public approach to health-care. The Fraser Liberal government introduced privately run hospitals, private physician services, and a special income tax levy. A two percent levy was to be paid by all Australians in the top income tax bracket who did not purchase private health insurance (i.e. part of the "carrot and stick" method to encourage wealthy Australians to purchase private insurance). The levy caused political tensions between the Commonwealth and the states because the revenue from the levy went to the Commonwealth government. The states argued that because they had partial claim on income tax revenue, they also had a claim on part of the levy. The Commonwealth disagreed and continued to collect the full levy (Saunders and Wiltshire 1980; Wallack and Srinivasan 2011. 122).

[10] The Liberal Party of Australia is politically unaligned with the Liberal Party of Canada. In Australia, the Liberal Party is highly conservative, whereas the Labor Party is socially liberal.

In addition to the Fraser government's ambitions to privatize health-care, the government also took a new approach to fiscal federalism. The government introduced the *States (Personal Income Tax Sharing) Agreement Act 1978*, and the Commonwealth transferred a fixed 39.87% of the personal income tax to the states through the new equalization transfer, in exchange for reducing Specific Purpose Payments (SPP) by an equal value (Wallack and Srinivasan 2011, 122-123).[11] In addition, all states became eligible for equalization transfers. This major federal-transfer policy reform demonstrates that a change to one component of the transfer system (general-purpose payments like equalization) affects other transfer payments (specific-purpose payments like SPP). By expanding the unconditional equalization transfer and constraining the conditional SPP transfers, the Commonwealth government emphasized state autonomy and wanted to remove itself from state policymaking. The most important change in terms of fiscal federalism during the Liberal Party period was the expansion of equalization to include all states. Prior to including all states in the formula, more affluent states complained that they were transferring funds to the less affluent states (the argument is similar in Canada). When the Liberal Party introduced equalization as a pan-Australian transfer including all states, equalization became a zero-sum game whereby all states had an interest in getting the most out of the Commonwealth budget (Dollery 2001).

The allocation of equalization among states uses the per capita "relativities" of each state. The Commonwealth Grants Commission reviewed equalization relativities and recommended how to distribute the new tax revenue to the states. The principles remained the same as those in the allocations made under Labor governments. State eligibility was still determined based on its demonstrated fiscal capacity to provide public services. However, because all states became eligible, using the fiscal capacity of New South Wales and Victoria as standard was no longer acceptable; rather, the Commonwealth Grants Commission changed the determination of national fiscal capacity to the national average of all states.

After the Commonwealth transferred equalization based on CGC recommendations and simultaneously reduced SPP to the states, state governments were not impressed with the new arrangement and some argued the Commonwealth should devolve all income tax revenue to the states. The state of New South Wales in particular was vocal arguing that more tax revenue

[11]"Relativity" is a number reflecting the general strength of a state economy. If a state's relativity is below one, which is the national average, the state receives less equalization transfer, while a state with a greater number than one receives more in equalization (CGC, 2015).

would be required to meet expenditure need. Other states such as Tasmania argued against the devolution of income tax revenue because the value of all income taxes was less in Tasmania than in New South Wales (Boothe 1996). States also argued that devolving taxes would create further expenditure needs because each state would have to create administrations to collect the new tax revenue. However, states welcomed the move of reducing SPP in exchange for equalization because states desired more freedom from the Commonwealth government. SPPs were conditional while equalization was unconditional. Therefore, states did not have to follow Commonwealth guidelines on how to spend equalization, whereas states had to follow Commonwealth rules when spending SPP.

States agreed that unconditional equalization was a better alternative than conditional SPP. However, the states and the Commonwealth disagreed on the treatment of SPP and equalization when it came to calculation of total entitlements. The Commonwealth argued that transfer entitlements were double counted because states received equalization based on need (e.g. road deficiencies) but also received SPP for major expenditure projects (e.g. roads). The Commonwealth asked the CGC to consider the effects SPP had on equalization entitlements, and to reduce equalization by the value of SPP. States argued the Commonwealth Grants Commission was an inappropriate body to determine Specific Purpose Payments.[12] States further argued that the reduction in equalization without adequate compensation meant states had to raise their own tax revenues from pay roll, property, and mining. States argued these tax revenues were inadequate to meet demands for health-care and other public services (CGC 1995). The compromise was to reduce equalization entitlements equal to the value of SPP received by a state, unless the Commonwealth ordered the Commonwealth Grants Commission not to take into account SPP in the calculation of equalization entitlements in certain cases. For example, if a state received funds through equalization based on a deficiency in the number of roads, but the state also received a Specific Purpose Payments for road improvement, the CGC would reduce equalization entitlement by the value of the Specific Purpose Payments for roads. However, in some cases, the Commonwealth could counter the CGC's recommendations if the Commonwealth felt an SPP should not be a determinant of equalization entitlements.

[12]The relativities used by the CGC for equalization transfer were different from the Commonwealth's SPP relativities (Saunders and Wiltshire 1980).

The Labor Party returned to power in 1983 and shifted Australian fiscal federalism again. In exchange for reducing SPPs, the Paul Keating Labor Government changed the total budget of equalization from 39.87% of personal income revenue, to 39.87% of Commonwealth general revenue (CGC 1995). To enshrine political cooperation between the states and the Commonwealth, Prime Minister Keating formed the Council of Australian Governments (COAG). At that time, Australians were dissatisfied with their governments for being unable to solve major issues, and the solution adopted was formal cooperation through the Council of Australian Governments (CGC 2008). One of the major issues Australians were dissatisfied with was health-care. In particular, Australians were not satisfied with the confusing process of navigating the health-care system. For example, a typical Australian patient could receive treatment from a state provided doctor, transfer to a Commonwealth hospital, and finally receive treatment from a private doctor. The process was confusing and Australians demanded better coordination and communication. The Commonwealth and state governments pledged to fix health-care through collaboration and to set aside jurisdictional debates and see health-care from the national interest (COAG 2011).

In 2000, the last major change to Australian fiscal federalism occurred when the revenue source of the equalization transfer changed to 100% of the revenue of the newly introduced Goods-and-Services Tax (GST) (Hollander 2008). As a condition of introducing a GST, state governments removed small taxes such as stamp taxes, and the Commonwealth government removed its wholesale tax system. States were adamant that the Commonwealth was taking away tax revenue when it abolished stamp taxes and other smaller tax revenues. The states demanded compensation for lost revenue by receiving 100 percent of the GST through the equalization transfer. The new, full GST revenue replaced a percentage of general revenue and became the only source of funding for equalization. This change of funding source increased the total equalization budget substantially. In 1999, the budget for equalization was approximately twenty-three billion dollars and one year later, it became approximately thirty-one billion dollars (CGC 2008).

This major tax reform motivated a change of the equalization allocation formula. According to the Commonwealth Grants Commission, the change to the GST meant

> Increased attention given to the Commission's work and related matters such as the continued appropriateness of equalisation as a basis for distributing the GST revenue, the implications of equalisation for the efficient allocation of resources

> across the country and the desirability of transparent and simple methods (CGC 2008, 35).

Following the GST change, the Commonwealth Grants Commission immediately became responsible for determining how to allocate the GST revenue through the equalization transfer. The Commonwealth Grants Commission changed its methodology of determining equalization entitlements and adopted the principle known as full fiscal equalization. Full fiscal equalization assesses the fiscal capacity and expenditure need of each state instead of the fiscal need of each state. Expenditure need is different from fiscal need because expenditure need looks at the various factors affecting the cost of providing public services (i.e. demographics, location, and ethnicity), while fiscal need looks at the difference between the revenue raised and the cost of providing public services in state budgets. Using fiscal need meant states were able to manipulate their spending habits to receive Commonwealth transfers. In order to minimize such perverse incentives, the Commonwealth Grants Commission requires that the relativities of fiscal capacity and expenditure needs used in the allocation formula must be outside government control. Full fiscal equalization ensures that all states have the same capacity to provide services and the associated infrastructure at the same standard of efficiency (Clemens and Veldhuis 2013).

By giving larger revenue (100 percent of GST) to the states through the equalization transfer and reducing SPP from ninety categories to five categories, the Commonwealth granted states a large amount of autonomy, since equalization is unconditional while SPP are conditional, and GST revenue is substantially larger than SPP grants. In addition, GST revenue is transparent because states know where funding comes from, whereas general revenue is not transparent. This funding source and the full fiscal equalization allocation formula have been unchanged since the GST inception in 2000. However, debates over fiscal federalism continued after 2000 in particular when the Labor government proposed to change health-care.

In 2008, the Rudd Labor Government attempted to centralize power by proposing the Commonwealth assume full control over public health-care. In exchange for assuming full spending responsibility for health-care, the Commonwealth suggested the states yield fifteen percent of GST revenue, leaving eighty-five percent to the states for equalization payments. The Commonwealth also tried to establish National Partnership Programs (another form of SPP) with the intention of incentivizing state governments to provide specific services of national interest

(Aulich and Evans 2010). State governments, however, perceived the Commonwealth proposal for nationalizing health-care as an intrusion on state jurisdiction of health-care and rejected the proposal. Because of the rising political tensions between the Rudd Government and state governments, the Commonwealth failed to accomplish nationalization of health-care, but many National Partnership Programs existed because of COAG negotiations. For example, some National Partnership Programs attempt to tackle hospital wait times and improve health outcomes (CGC 2015). In addition, the Commonwealth government and states agreed in 2011 to tackle diabetes and improve access for cancer treatments (COAG 2011). These successful coordination efforts demonstrate that a collaborative approach can work in a federation to support the national interest.

National partnerships are important in coordinating efforts to improve the Australian health-care system, and a collaborative approach respects both state jurisdiction and the national interest. However, equalization remains the most important means by which the Commonwealth government ensures equity in access of public services across Australia. Equalization entitlements are determined based on the relativities of the states. The Commonwealth Grants Commission uses the following formula to calculate the equalization relativities:

$$Per-capita\ GST\ relativity\ for\ a\ state = \frac{(assessed\ expenditure - assessed\ net\ borrowing - assessed\ revenue - other\ Commonwealth\ grants)}{state\ population} \quad (2)$$

The assessed expenditure is the total assessed expenses of a state plus the assessed investment of a state. Assessed expenses are the sum of the expenditures in various expenditure categories. Each expenditure category includes a number of need factors called “disabilities” as summarized in table 4.3 (CGC 2015).

Table 4.3 Expenditure Categories and Applicable Disabilities

Expenditure Categories	Disabilities
Schools	Aboriginal status, remoteness, urban/rural population, non-state sector, wage costs, regional costs,
Post-Secondary Education	Aboriginal status, remoteness, age, wage costs, regional costs
Admitted Patients	Aboriginal status, remoteness, age, non-state sector, wage costs,
Welfare and Housing	Aboriginal status, remoteness, age, wage costs, regional costs,
Services to Communities	Aboriginal status, remoteness, wage costs, regional costs
Justice Services	Aboriginal status, age, wage costs, regional costs,
Roads	Urban/rural population, wage costs, regional costs
Transport Services	Urban/rural population, wage costs, regional costs

Source: CGC (2015)

The Commonwealth Grants Commission explains the expenditure categories in Table 4.3 in details (CGC 2015). Schools include spending on government and non-government pre-schools, primary and secondary schools and student transport services. Post-Secondary education includes spending on vocational education training and higher education. The admitted patients variable means spending on public hospitals, community, and public health services. Welfare and Housing includes spending on social housing and welfare services. The "services to communities" variable means spending on utilities (electricity, water, and wastewater). Justice services means spending on police, courts, and prisons while roads means spending on road maintenance (i.e. repaving, repairing bridges, and tunnels).

Calculating assessed investments requires four steps. The first step is to find the total disabilities affecting the quantity of infrastructure required by a state (d), cost disability for the state (cd), population of the state (p), the total value of the Australian infrastructure stocks (K), and the total Australian population at the beginning of a given year (P). The second step is to determine the same values for each variable at the end of a given year. The third step is to compute the assessed investment at the beginning and the end of year respectively by dividing (K) by (P) and then multiplying by (d) and (p). In the final step, the assessed investment at the beginning of the year is subtracted from the assessed investment at the end of the year and multiplied by (cd). The result is the assessed investment (CGC 2015).

Assessed net borrowing is the total revenue raised through borrowing at the beginning of the year subtracted from the amount borrowed at the end of the year. Assessed revenue is the total dollar value the state could raise if it applied the standard tax rate to payroll tax, land tax, stamp duty on conveyances, insurance tax, motor tax, and mining revenue. Finally, other

Commonwealth grants are the SPP funds allocated to the states for specific purposes. The final per capita GST relativity for each state on an annual basis is then calculated according to formula (2) above. The important numbers used for the calculation of relativities in 2013-14 are given in table 4.4 below.

Table 4.4 The Per-Capita Amounts (AU$) and The GST Relativities in 2013-2014

States	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory
Assessed Expenses	8512	8096	9367	9625	9108	9661	18718
Assessed Investment	383	455	408	585	266	89	646
Assessed Expenditure	8895	8551	9775	10209	9375	9750	19364
Assessed Net Borrowing	435	446	441	457	421	406	437
Assessed Revenue	4851	4458	4902	7921	4145	3677	4918
Total Requirement for Assistance	3609	3648	4432	1831	4808	5667	14009
Other Commonwealth Transfers	1597	1752	1622	1556	1563	1674	2649
GST Requirement	2012	1896	2809	275	3246	3993	11360
Per-Capita Relativity	**0.917**	**0.864**	**1.280**	**0.125**	**1.479**	**1.819**	**5.177**
National Average GST per capita	2199	2199	2199	2199	2199	2199	2199
Per-Capita Equalization ($AU)	2016	1899	2814	274	3252	3999	11384
Total Equalization ($AU millions)	15363	11497	9991	2962	4719	1807	2861

Source: Commonwealth Grants Commission (2015)

Table 4.4 shows the data of per capita amount for each component of the relativity formula in equation (2) for the fiscal year of 2013-2014. A state's entitlement is based on its relativity to the national average GST entitlement (i.e. in 2013-2014 average GST was $2199 per capita). For example, the state of New South Wales has a relativity of 0.917. This means that New South Wales is relatively economically strong and/or has a lower expenditure need in comparison to the national average (relativity of 1.0). New South Wales is then entitled to 91.7%

of the national average GST on a per-capita basis. The Northern Territory has a relativity of 5.177 and is entitled to 518 percent of the national average GST on a per-capita basis.

To illustrate the process the Commonwealth Grants Commission uses to calculate GST entitlements, let us take the most recent report the CGC issued in determining equalization for Western Australia. In 2015, the Commonwealth Grants Commission undertook its five-year review of equalization in order to consider how much GST revenue Western Australia should receive. The process involved examining the changes to both revenue and expenditure needs in Western Australia from the year 2010 to 2015. On the revenue side, Western Australia benefitted from an increase in mining revenue. Western Australia is rich in natural resources and therefore its revenue increased substantially over the five-year period. Natural resources exist unequally across Australia, which means states like Tasmania did not benefit from an increase in mining revenue. If everything else remained unchanged, an increase in mining revenue would mean the CGC would reduce Western Australia's equalization entitlements. According to the Commonwealth Grants Commission, Western Australia's expenditure needs increased because of its population growth since 2010, a larger share of the total Australian Aboriginal population, and a larger portion of Western Australians living in remote communities. Population growth meant an increased burden on public services and therefore the Commonwealth Grants Commission considered the growth in population size as affecting expenditure need. Western Australia also has a large portion of Australia's Aboriginal population, many of whom live in remote locations. The CGC recognizes the higher cost of providing services in remote locations and the increased need of Aboriginal citizens because of their socio-economic status. After calculating both revenue and expenditure need, the Commonwealth Grants Commission determined the new revenue gained from mining revenue exceeded the burden of an increased need for public services for Western Australia. In addition, the CGC did not receive instruction from the Commonwealth to disregard any SPP entitlement when determining equalization entitlement. This meant the Commonwealth Grants Commission recognized that Western Australia's SPP entitlements had an effect on its equalization entitlements. The CGC's final recommendation for Western Australia was to reduce equalization entitlement for 2015 (CGC 2015).

As shown by the needs-based formula described above, the allocation formula for equalization in Australia attempts to mitigate the inherent disparities in both revenue and

expenditure needs among the states and territories. The “disabilities” indicators for each expenditure category (in Table 4.3) are the critical need factors that determine the assessed expense, assessed expenditure, and the final per-capita relativity and per-capita equalization entitlement of a state.

As shown in the fourth row of Table 4.3, the needs factors for expenditure category “Admitted Patients” (the health-care category) in the equalization formula include age, Aboriginal status, remoteness, wage costs, and non-state sector. These need indicators are those the CGC regards as policy-neutral indicators of needs (that minimize perverse incentives). According to Commonwealth Grants Commission, demographics including age and aboriginal status are strong proxy indicators of needs and relate to the uncontrollable expenditure cost of the states. This justification is consistent with the theoretical framework outlined in chapter one and two, which demonstrates why demographics indicate need and how they are efficient indicators because demographics are free of perverse incentives. Australia uses the total population above age sixty-five and the total population that identified as Aboriginal as need indicators. The Australian Bureau of Statistics provides the data of age and Aboriginal status, and the CGC uses that data for its calculations and recommendations.

Remote location is another indicator used in the equalization allocation formula, illustrating the increased cost of providing services to those outside major urban centres. The Commonwealth Grants Commission argues that location is a policy neutral need indicator because the cost of providing public services to those in remote locations is inherently higher than providing public services to Australians in urban locations (CGC 2015). The University of Adelaide proposed a methodology for allocating resources based on location and designed a tool called Accessibility Remoteness Index of Australia (GISCA 2006). The tool allows anyone with computer access to find his or her individual geographic location relative to the nearest service centre. A service centre is a location that provides public services such as a primary health centre, school, or hospital. The Commonwealth Grants Commission uses this transparent tool, combined with Australian Bureau of Statistics data on geographic population dispersion, to find appropriate allocations of money based on geographic location. Accessibility Remoteness Index of Australia is calculated by finding the remoteness (i.e. zero = lowest accessibility to public services, fifteen = highest remoteness) of a town dependent on its relative distance to five

different categories of service centers.[13] The five service locations are determined based on the size of population in each location. For example, a category "A" service area has over 250,000 persons while an "E" category has between 1000 and 4999 persons. Calculating remoteness requires finding the distance in kilometres using existing roads from the location in question to the nearest six service centers. For example, Pine Creek is in the Northern Territory and is 2,819 kilometres from its nearest category "A" service centre. Pine Creek is 212 kilometres from its category "B" service centre, 212 kilometres from its category C service centre, and 92 kilometres from its category "D" service centre. The next step involves dividing each number by the national average for each category (i.e. category A = 2,819/418, category B = 212/217, category C = 92/84, category D = 92/47). Finally, the Accessibility Remoteness Index is found by summing the relative distance index from a location to the five service centers (i.e.3.00 + 0.98 + 1.61 + 1.10 + 1.96 = 8.65).The result gives the Access and Remoteness Index score which the CGC uses to calculate equalization funding (i.e. higher scores mean higher funding).

Wage costs are calculated by estimating the additional costs of paying for employees relative to the national average wage each state would have to pay for the average employee. The difference is estimated using an econometric model of private sector employee wages controlling for the differences in education, industry, and experience. The Commonwealth Grants Commission uses private sector wages because public sector wages are influenced by government and are therefore not policy neutral (CGC 2015).

Non-state sector costs are calculated by finding the number of services provided by both the public and private sector (i.e. duplicated services). The CGC estimated in 2015 that approximately twenty-eight percent of health-care services were duplicated by the private sector. The Commonwealth Grants Commission argues that citizens who use private health-care services will not use public health-care services, and therefore reduces equalization entitlements by the number of the duplicated services (CGC 2015).

Referring to the theoretical framework identified in Chapter two, the Australian equalization formula is a mixture of both need and non-need indicators. The need indicators are age and Aboriginal status. The non-need indicators are remoteness, wage costs, and non-state

[13] The highest Access and Remoteness Index each region can have is fifteen and because there are five categories, the highest value each category can have is three.

sector. These indicators are non-needs because they are associated with the cost of providing public services rather than reflecting amount of services deemed medically necessary.

The two need indicators (age and Aboriginal status) meet the criteria of equity and efficiency as both are empirically linked with need for public services (equity) and cannot be manipulated (i.e. efficient, free of perverse incentive).

Wage costs meet equity criteria because all Australians have the right to access public services regardless of their location, therefore government should provide the necessary compensation for employees providing public services regardless of location. Wage costs meet the criteria of efficiency because wage costs are determined by location of service provision. The government cannot control the cost of providing services to remote locations due to local wage rate, which means in terms of government policy, wage costs generate little perverse incentive. In addition, the CGC uses the average private sector wages, controlling for education, industry, and experience factors, when determining the wage costs of each state. This step means the Commonwealth Grants Commission keeps wage costs policy neutral because state governments do not have as much influence over private sector wages as they do on public sector wages.

The non-state sector indicator is equitable because states are required to provide citizens access to a number of public services while some states have prominent private sectors that provide duplicate services. The CGC recognizes that some states cannot offer non-state services (i.e. large remote populations) and therefore the services have to be provided by the state. Therefore, it is fair for the CGC to recognize the impact of the non-state sector in allocating GST revenues. The non-state indicator is also efficient because the inclusion of this variable in the formula produces little perverse incentives. For example, if New South Wales has a thriving non-state sector providing physiotherapy services, New South Wales will not receive all the funding for physiotherapy services. There is no incentive for New South Wales to provide more public physiotherapy services in order to receive more funding because providing the public services will cost the same amount of resources as the potential additional transfer. However, a state like the Northern Territory has a high remote population and a largely absent non-state sector that could provide physiotherapy services. In this case, the state should receive more in funding because the Northern Territory is forced to provide the service through the public sector (CGC 2015).

Finally, remoteness of population is non-need but the variable could be justified because it seeks to promote equitable access to public services. In addition, remoteness could arguably be efficient because it is difficult to manipulate geographical location of population. The consideration of location is integral to the territories of Australia. Like Canada, Australia's territorial population is remote and is comprised of a majority of Aboriginal peoples. Taking remoteness of location into consideration ensures an equitable allocation of funding to the territories. Remoteness of location is included in the equalization formula in Australia also because the territories do not receive special transfers based on remoteness as in Canada (Territorial Formula Financing in Canada), so double counting of needs is a not an issue. In addition, the formula for the total equalization received by the states and territories removes other Commonwealth grants to ensure the equalization transfer does not double count the already existing SPP.

Table 4.5 Full Fiscal Equalization vs. Equal-per-capita Formula in 2015 (millions $)

State	Full-Fiscal-Equalization Formula	Equal-per-capita Formula	Redistribution (=Col.1-Col.2)
New South Wales	17,311	18,200	-899
Victoria	12,755	14,234	-1,479
Queensland	13,046	11,525	1,521
Western Australia	1,935	6,425	-4,490
South Australia	5,525	4,050	1,475
Tasmania	2,236	1,224	1,012
Northern Territory	3,351	599	2,752

Table 4.5 shows the impact of the needs-based equalization formula against the benchmark, equal-per-capita distribution. As described before, the needs-based full fiscal equalization formula determines the relativities and equalization entitlements of states based on their relative population size, revenue capacity, and expenditure needs. An equal-per-capita formula (like the one for CHT allocation after 2014) determines the equalization entitlements of

states based on only their relative population size. Compared with an equal-per-capita allocation, the full-fiscal-equalization principle produces winners and losers. New South Wales, Victoria, and Western Australia lose under the full-fiscal-equalization formula, while Queensland, South Australia, Tasmania, and the Northern Territory gain through the full fiscal equalization. Through this inter-state redistribution, equalization is integral to upholding the national unity and maintains a sense of nationalism in Australia. Western Australia provides a good example of the importance of equalization because Western Australia was for decades a relatively poor state. Recall that Western Australia threatened cessation because the Commonwealth would not meet its needs. Today, Western Australia is one of the most fiscally strong Australian states (and therefore a contributing state in equalization). However Western Australia remains adamant that equalization should keep the principles of full horizontal equalization because it recognizes the same fiscal challenge to the other states that Western Australia faced in its past. Western Australia, like the other states, is committed to the principle of equity and ensuring that Australians have the same standard of public services (CGC 2015). In addition, regional divides are less important in Australia than in Canada, which means Australian states are willing to accept assisting poorer states if assisting the states means protecting the national interest.

Full fiscal equalization based NBF is politically feasible in Australia because the country is committed to achieving full horizontal and vertical equity and because the CGC is an independent arbiter for the states, thus diffusing political tension between the Commonwealth and state governments. Through the Commonwealth Grants Commission, the Australian governments agree to the principles of full fiscal equalization and balance equity and efficiency. Each variable included in the current NBF for the equalization transfer has undergone intense scrutiny by the Commonwealth and the state governments. For example, in calculating the influence of non-state health-care on equalization, the CGC calculated in 2015 that approximately twenty-eight percent of health-care services were duplicated (i.e. provided by both the public and private sector). The Commonwealth Grants Commission recommended that the cost of these duplicates services be deducted from equalization when determining equalization entitlements. South Australia disagreed and argued the number of private health-care services varied across Australia and South Australia did not have as large a private sector as other states. South Australia was a lone voice in opposition to the CGC's recommendations and therefore did not influence the CGC's final recommendation (CGC 2015).This demonstrates that,

through research and negotiations, Australia has been able to find a balance between equity and efficiency within its country's own context, to create a feasible NBF.

Table 4.6 summarizes the history of equalization in Australia. Initially, transfers helped cover a claimant (relatively poor) state's budgetary deficiencies. Funding to alleviate these deficiencies came from the general revenue of the Commonwealth. Transfers changed under the Fraser Government where personal income tax became the source of transfer funding, and instead of only poor states being eligible for equalization, all states became eligible. The year 2000 brought the GST revenue, the new major source of funding for equalization, and the adoption of the full fiscal equalization principles of the transfer system, whereby states received funds based on revenue and expenditure deficiencies outside state control. The change to full fiscal equalization meant Australia adopted an NBF that upheld the equity principle of meeting state expenditure and revenue needs, while recognizing efficiency concerns.

Table 4.6 History of Equalization in Australia

	1933-1978	**1979-1999**	**2000-Present**
Program name	**Equalization**	**Equalization**	**Equalization**
Source funding	The portion of general revenue needed to meet budget deficiencies of claimant states	39.87% of the personal income tax revenue, and later a percentage of total general revenue	100% of the GST revenue
Objective	Ensure sufficient revenues to provide the average standard of services	Ensure sufficient revenues to provide the average standard of services	Ensure sufficient revenues to provide the average standard of services at the same level of efficiency
Allocation formula	Based on budgetary deficiencies of claimant states[14]	Based on per capita "relativities"[15]	Full fiscal equalization
Recipient	Claimant states	All states	All states

[14] Revenue of a state calculates as the amount a claimant state could have raised if its tax rate was the same as the average of the non-claimant states subtracted from its actual tax revenue. State expenditure is the unit cost of social services in a claimant state multiplied by the number of units in a claimant state.

[15] As a result of all states becoming eligible for equalization the formula changed to: standardized expenditure (standard expenditure plus the relative expenditure need in comparison with the other states) subtracted from its standardized revenue (standard revenue subtract its relative revenue needs in comparison with the other states)

4.3 Comparing Canada and Australia to Draw Lessons

There are more differences than similarities between the history of the Canadian and Australian federal health transfer systems. A major divide between the two federations occurred at the end of the Second World War when the two countries chose separate paths to deal with fiscal federalism. Canada addressed the vertical fiscal gap through transfers and tax allocations, and Australia just used transfers. The federal government of Canada reduced its taxation power and allowed the provinces to collect their own tax revenue to pay for public services, while Australia's Commonwealth government retained fiscal power because of the Uniform Tax Act 1942. In terms of addressing horizontal fiscal gaps among provinces/states in the area of health-care, Canada equalizes provincial fiscal capacity through the equalization program and ignores differences in expenditure needs in the equalization program or the CHT and their predecessors. From the beginning of the equalization program in 1933 to today, Australia equalizes based on both fiscal capacity and expenditure needs through the equalization transfer and attempts to uphold national standards and the national interest through equalization.

Because Australian states and the Commonwealth recognized that poorer states had poor fiscal capacity to meet their expenditure needs, the states and Commonwealth agreed to mitigate these differences through an NBF. In addition, the High Court ruling on the Uniform Tax Act in 1942 allowed the Commonwealth to retain fiscal power over the states, making the states dependent on Commonwealth grants. The *Uniform Tax Act* in 1942 and the High Court ruling gave the Commonwealth considerable financial power, which necessitated the CGC to ensure a fair allocation of Commonwealth grants. Although most states preferred tax room to special grants, states were confident the Commonwealth Grants Commission would represent their interests to meet their needs and, thereby, went along with using the NBF developed by the CGC. In addition, the states believed in the principle of full fiscal equalization, which meant the states could agree to ensure the needs of all Australians would be met. Therefore, Australia adopted and maintained an NBF because of the fiscal power of the Commonwealth government, the presence of the Commonwealth Grants Commission, state commitment to full fiscal equalization, and the resulting strong degree of political cooperation between the Commonwealth and the states.

Finally, there is the presence of the Council of Australian Governments a formal institution dedicated to ensuring all governments work together towards the national interest of

Australia (Warhurst 2007). The formal institution of COAG solidified an existing relationship whereby the Commonwealth and states could work together to address national issues and maintain a strong collaborative relationship. These events formed a context where Australia could adopt and maintain a needs-based approach for its equalization transfer system.

Australia adopted the needs-based approach in the early years of federation, while the Canadian federal government was less concerned with reshaping fiscal federalism and more concerned with staving off another recession after the Second World War. The federal government in Canada chose to decentralize instead of taking a centralist approach, giving the provincial governments the fiscal power to meet their needs. The decentralization of taxation power meant the federal government had less power to persuade the provinces to act in the national interest. Instead, the provinces gained financial power and were able to shape their own priorities. The inward looking focus on provincial jurisdiction has meant the provinces largely function independently and prioritize their own agendas towards Medicare, which could have serious implications for national standards of Medicare.

The 1970s marked changes in federal transfers in both countries. The federal and provincial/state governments agreed to new arrangements in transfers. The Canadian federal government feared increasing health-care costs, and the Australian Fraser government preferred a limited role of government in areas of social policy. The Trudeau government removed cost-sharing arrangements for Medicare and established block funding, which included both income tax-points and cash grants; the Fraser government in Australia cut SPP for all states, in proportion to the value of income tax received by the states. At the federal level, both governments attempted to reduce their financial responsibility and maintain a national standard of Medicare. Canada accomplished this goal through the block grant and the CHA, and the Commonwealth in Australia achieved this goal by retaining fiscal power and assuming major controls over health-care jurisdiction.

Federal grants underwent drastic changes in the 1990s when Canada's federal government unilaterally slashed federal transfers to the provinces while retaining the equal-per-capita cash and tax-point transfer allocation formula. Australia's federal government made federal transfers more equitable and efficient by instituting full fiscal equalization and substantially reducing the number of SPP. The changes in Canada created a highly tense relationship between the provinces and the federal government: the provinces formed the

Council of the Federation (COF) for solving collective provincial issues without the participation of the federal government. Australia moved in the opposite direction and established the COAG to address national issues.

Federal cooperation is necessary in Australia because of government interconnection through jurisdictional responsibility. Australian health-care is a shared jurisdiction between the two levels of governments with the Commonwealth controlling Medicare services and the states controlling community health services. The relationship is not necessarily equal because the Commonwealth is able to exert its financial power over the states to achieve its goals, but the public pressure to see a uniform and less-confusing health-care system has forced the two governments to reduce tension and form mutual agreements. For example, in 2011, the COAG signed a health-care partnership with the Commonwealth to improve health outcomes of Australians and to reduce waste and confusion within the health-care system (CGC 2015).

Medicare jurisdiction in Canada is provincial, but the federal government has a constitutional and moral obligation to uphold the principles of national Medicare and ensure the provinces can provide Canadians with access to Medicare. Policy makers can draw lessons from the Australian story to determine if adopting an NBF is practical for Canada. Although changes in Australia's equalization program are the result of institutional decisions—including the High Court's validation of the Uniform Tax Act that solidified the Commonwealth's dominance over tax revenue—the Australian federation was able to adopt and maintain an NBF because the states and Commonwealth worked together to meet national objectives through formal institutions. Initially, the country focussed on equity in providing public services. The required cooperation and trust for achieving this goal came through the CGC whereby non-partisan decisions exist based on evidence. Over time, the Commonwealth government sought ways to improve efficiency of transfers. It argued that a large number of relativities created confusion and each required justification: the relativity had to be policy neutral in order to be included in the formula. The Commonwealth Grants Commission then ensured policy neutral relativities for equalization entitlements, leading to a more efficient allocation of financial resources.

Canada's story of federal transfers demonstrates a diminished role of the federal government in preserving Medicare and the increased influence of provincial autonomy over health-care. Initially, the federal and provincial governments worked together through cost-sharing agreements toward a national standard in health-care and social services. However, after

the transferring of tax-points to provinces in 1977, the federal government slowly retreated from the field of provincial health-care policy. The provinces achieved their goal of autonomy gradually, and the federal government withdrew from Medicare policy decision-making, culminating in the equal-per-capita cash transfer of 2014. A change to a needs-based approach would require a fundamental shift of the federal-provincial relationship away from clear divisions of jurisdictional power toward a collaborative partnership. By changing to the needs-based approach and considering the national interest of Canadian Medicare, the provinces, territories, and federal government can fulfil their constitutional roles to ensure access to essential Medicare services.

There are a number of unlikely lessons Canada can draw from Australia, as well as some important positive lessons. The most unlikely lesson Canada can draw from Australia is the Australian approach to federalism. Canada is a highly regionalized federation whose regions are obligated to advance their own interests because of lack of federal institutions to represent a wide array of regional and cultural needs. Canada has a multifaceted view of itself as a nation. Quebec views Canada as a duality (i.e. two nations together in confederation), while English speaking Canada tends to view Canada as a multi-cultural mosaic of many different cultural groups in one federation. Australia has a national view of federalism that does not focus on regionalism or cultural divides. Australian states are autonomous but they recognize that they represent a more homogenous population. In addition, Australian states recognize that the senate and the Commonwealth Grants Commission represent state political interests. The senate of Australia is comprised of state elected senators that, in theory, represent the interests of the states. The Canadian senate is a federally appointed upper chamber, which does not adequately represent regional interests. Therefore, regions may feel their political interests are not being heard at the national level. The Commonwealth Grants Commission also considers the interests of the states when it makes its equalization allocation recommendations. States feel that the Commission respects state interests and recommends equalization allocations based on a combination of state argument and empirical evidence. Canada does not have an equivalent body, which further exacerbates the divide between the regions of Canada and the belief that their interests are not being met at the national level.

Another lesson Canada is unlikely to draw from Australia is the centralized power of taxation in the federal government. Australia's Commonwealth government controls the majority

of tax revenue and the majority of expenditure responsibility, whereas the Canadian provinces control the majority of tax revenue and expenditure responsibility in Canada. Canada's provinces and territories are unlikely to relinquish power to the federal government because the provinces and territories already believe that their interests are not being met at the national level (i.e. lack of a regionally representative senate, or an independent body responsible for allocating transfers). Without adequate representation and a strong belief that the provinces and territories would gain from having the federal government control the majority of taxation power, it is unlikely the provinces and territories would be willing to change the current tax structure (Watts 1999).

However, despite the near impossibility of changing the state of federalism within Canada because of decentralized taxation power and regional divides, Canada can draw from Australia the lesson of collaboration because Canadian Medicare is a public program that requires federal and provincial cooperation to preserve an integral piece of Canadian citizenship. The Romanow Commission articulated that Canadians expect that universal Medicare be available and provided to all Canadians regardless of province or territory of residence; Canadians also expect their governments, both provincial and federal, to safeguard universal Medicare through collaboration. The high value Canadians place on Medicare should spur the federal and provincial governments to find ways of preserving the national standard of Medicare and a needs-based formula could be a viable policy option. With a firm understanding of the definitions, concepts and criteria behind a NBF, Canadian policy makers can then learn from the Australian experience to design a desirable and feasible NBF for the CHT.

One lesson Canadian policy makers may draw from the history of the Australia's transfer system is the use of formalized bodies responsible for federal/provincial transfer arrangements. The Commonwealth Grants Commission is an independent organization, using evidence and transparent criteria to recommend allocation of equalization in Australia (McLean 2004). The Commonwealth respects the CGC and its judgements, and the CGC listens to the concerns of the states. The CGC revisits its methodologies every five years and consults with states and other stakeholders on potential changes to the formula (CGC 2015). The Commonwealth and states occasionally ask the CGC to review its allocation methodologies given certain criteria. The CGC listens to the arguments put forward by states and stakeholders and weighs their arguments against the principles of full fiscal equalization. States can dispute CGC decisions, but the

allocation is a zero-sum game. A body similar to the Commonwealth Grants Commission could make decisions on allocating the CHT based on evidence and consistent with the criteria of equity and efficiency. An independent body would reduce the political tensions present between the federal and provincial governments (Béland and Lecours 2013). In addition, it would necessitate the provinces to work with the independent body and the federal government to make the most informed policy decisions. If Canada were to create an independent body like the Commonwealth Grants Commission, provinces would have a forum to present policy concerns with the CHT. An independent body would provide stability to the federal arrangement insofar as any changes to the formula would require the input of the provinces and federal government.

In addition to the benefits of an organization like the Commonwealth Grants Commission, Canada can draw lessons from the principles of the Council of Australian Governments. The Council of Australian Governments (COAG) is a formal body that allows the federal and state governments to unite ideas and combat national issues. Canada does not have an equivalent body to COAG. Although premiers casually meet, there is no formal institution designed to facilitate collaboration between provincial and federal governments. Creating a permanent body similar to COAG would increase the likelihood of an NBF because federal and provincial leaders would meet and discuss regularly and collectively make decisions in the interest of the country.

Although it is impossible to replicate the Australian story given the nature of importing policies from other countries, Canada could still benefit from having institutions like the Commonwealth Grants Commission and the Council of Australian Governments. The presence of both bodies reduces political tensions between the two levels of government in the contentious zero-sum game of allocation transfers, and allows formal cooperation. Past proposals on adopting an independent body like the CGC in Canada focus on amending the Canadian equalization system (Béland and Lecours 2013). Equalization is highly contentious in Canada and it is unlikely that any meaningful reform to the equalization system will occur in Canada in the near future because of the regional divides, as is evident in the O'Brian Commission (Béland and Lecours 2013). Regional divides are more noticeable in Canada than Australia, which could mean that a change to equalization, without the consent of all the provinces, could create political unrest. Provinces believe they are not adequately represented at the federal level and therefore have to represent themselves in negotiations with the federal government. Therefore, a

change to equalization is not likely to occur if it does not receive support of fiscally stronger provinces such as Ontario and Alberta. If the federal government was to adopt full fiscal equalization, affluent provinces like Ontario and Alberta may perceive their financial prosperity as being arbitrarily taken from them through the ‘equalizing’ process. For example, because Alberta’s fiscal capacity is much higher than other provinces, Alberta may not agree with equalizing up the fiscal capacity of other provinces based on full fiscal equalization principle, which may mean a greater degree of redistribution of tax revenue from Alberta to the other provinces. This means it is even more difficult for Alberta to agree with being ‘equalized down’ to ensure all provinces are equal in terms of full fiscal capacity (Béland and Lecours 2013).

CHAPTER 5
CONCLUSION

Medicare funding is one of the major public policies currently being discussed by the provincial and federal governments. The CHT shifted to an equal-per capita allocation formula in 2014, it is likely that the federal and provincial governments will sign a new health accord in the near future. Policy makers can use opportunities to make lasting change to the CHT to ensure a minimum national standard in Medicare and uphold a sense of nationhood. Adopting a needs-based approach is advisable, and this study provides necessary tools to develop a potential needs-based formula.

This study first outlines a theoretical framework for the design of a desirable needs-based formula. It then draws lessons on the feasibility of an NBF for the CHT through a comparative study of the histories of the equalization program in Australia and the CHT in Canada. The theoretical framework presented in chapter one and applied in the rest of the chapters shows how policy makers can see how the total cost of Medicare relates to population needs, the over-use of the system, unmet needs, and input costs. The framework emphasizes the importance of understanding need and choosing appropriate need indicators when developing a formula. This study also defines the equity and efficiency criteria that policy makers can use to select need indicators. The study also reviewed and evaluated the mostly commonly used need indicator against the equity and efficiency criteria.

This study should be helpful to policy makers who want to learn from the experience of other countries in their development of an NBF. The comparative study using Australian reveals that it is possible to design a needs-based formula if policy makers adhere to the principles of equity and efficiency, and agree to uphold the national values about Medicare. If policy makers adequately balance equity and efficiency concerns and justify needs indicators in a formula, it is likely to succeed. The criteria proposed in the theoretical framework, and the indicators used in the Australian Equalization transfer suggest that a potential needs-based formula for CHT could include age structure, sex, and geographic dispersion of population. These indicators meet equity and efficiency criteria because they indicate need and lead to little perverse incentive. If econometric methods and reliable data became available, more need indicators as used in the Australian formula (such as wage cost) could also be included in a NBF. However, suggesting

what a practical formula would look like for the CHT requires serious empirical investigation and is beyond the scope of this study.

The findings of this study suggest that although it is possible to design an NBF for the CHT, a change to NBF is currently unlikely given the institutional setting and the lack of collaboration between the two levels of government in the past decades. The comparative study also shows that there are several unlikely lessons to be learned from Australia. First, it is unlikely that Canada will adopt the Australian view of federalism given Canada's deep regional divides and commitment to furthering regional interests. The Canadian provinces and territories believe that their interests are not fully represented at the federal level, partially because Canada does not have a formal body like the Australian senate, Commonwealth Grants Commission, or Council of Australian Governments. The lack of formal institutions representing the regional interests of Canada means the provinces and territories focus on regional rather than national interests. A second unlikely lesson is the tax structure of Canada. Canada is unlikely to adopt Australia's federally dominated tax system with the federal government controlling most tax revenue and expenditure programs. The provinces and territories are unlikely to yield financial power to the federal government because giving power to the federal government could be perceived as assuming a subsidiary role in Canadian federalism. In addition, because the provinces and territories regard their interests as being unrepresented at the national level, relinquishing tax responsibility would only exacerbate the issue.

Until both levels of governments can see that Medicare is in the national interest and is not a simple matter of constitutional jurisdiction, a needs-based approach is unlikely to work in the Canadian context. However, if the two levels of government are serious about signing a new health accord and making the Canadian Medicare system stronger, then Canadian policy makers can use this study to help design a system that promotes the national interest and sustains the national standard of Medicare for years to come. To make this happen, Australia provides positive lessons for Canada by the Commonwealth Grants Commission and the Council of Australian Governments. The CGC is an important part of Australia's equalization program because it provides non-partisan recommendations to the Commonwealth government on how it should allocated the GST revenue through equalization. An institution similar to the Commonwealth Grants Commission could benefit Canada and provide stability to the CHT in the future. A body like the Commonwealth Grants Commission could alleviate tension between

governments, but ultimately, Medicare is a joint responsibility, which means the two levels of government need to work together to safeguard Canadian Medicare. The principles of COAG provide a good lesson from Australia on how to conduct formal discussions on issues of the national interest. The Council of Australian Governments establishes formal annual discussions between the Commonwealth and state governments as equal partners in solving national public policy problems. The equal partnership principle of the Council of Australian Governments could allow the provincial, territorial, and federal government to work together towards the national interest in Medicare, and a good start would be to agree on a new funding formula for the CHT.

If the strong citizen support for a national standard in Medicare is still in place in Canada, the theoretical framework and examples provided in this study could guide the modelling of the future empirical studies and lead to a more rigorous debate on the reform of Canada Health Transfer. In contrast to a reform to the equalization allocation formula, most provinces are willing to discuss changes to the CHT. The 2004 health accord expired in 2014. The provinces have called upon the federal government to negotiate a new health accord and to increase CHT funding. The Liberal party led by Justin Trudeau committed during the 2015 election to renew the health accord and to establish a collaborative relationship with the provinces. The federal and provincial governments have an opportunity to make a lasting impact on Medicare by working together in the national interest.

Although the discussions among the federal and provincial/territorial governments have yet to begin (scheduled to be in fall of 2016, McGregor 2016), the provinces of Ontario and Quebec have called on the federal government to change the CHT formula to a needs-based formula that adjusts for demographics (Curry and Van Praet 2015). The framework and examples provided in this study will provide policy makers a deeper and broader understanding of the reasoning and construct of potential needs-based allocation formula. The federal and provincial governments could consider the implications of developing a needs-based formula for the Canada Health Transfer, by looking at how equitable and efficiency a new distribution is, how a distribution will affect each province, and how a needs-based formula will benefit the country and safeguard the national interest of Medicare.

Despite these interesting findings, this study has a number of limitations. First, the theoretical framework provides a summary of the essential conditions for a needs-based formula.

Policy makers can use this tool to consider various need indicators and factors for a needs-based formula. However, developing an actual mathematical formula requires serious econometric analyses of Canadian data. For example, the theoretical framework may suggest that age is a need indicator that is both equitable and efficient, but the framework does not specify how to create a mathematical formula using statistical data about age. Further technical work is required in order to make the proposed theoretical framework practical. Second, the study focussed only on one federal country in its comparison with Canada. Expanding comparison to other federal countries could improve the scope and depth of lesson drawing. Another limitation was in the method of this study. Due to the constraint of time and resources, this study is limited to analysis of documents and statistics. The breadth of this study could have improved by including interviews with Canadian and Australian federal transfer experts and bureaucrats. Finally, the study was limited to examining the CHT when a more comprehensive study of the entire federal transfer system in both Canada and Australia could have resulted in a more thorough analysis.

This study has the potential to influence public debate on the desirability and feasibility of a needs-based formula for federal transfers. Researchers may be interested in expanding this study to other countries to establish a comprehensive understanding of why countries adopt various needs-based formulas. Focus could also expand to the Canada Social Transfer or to Equalization to see if these transfers could follow a needs-based approach.

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